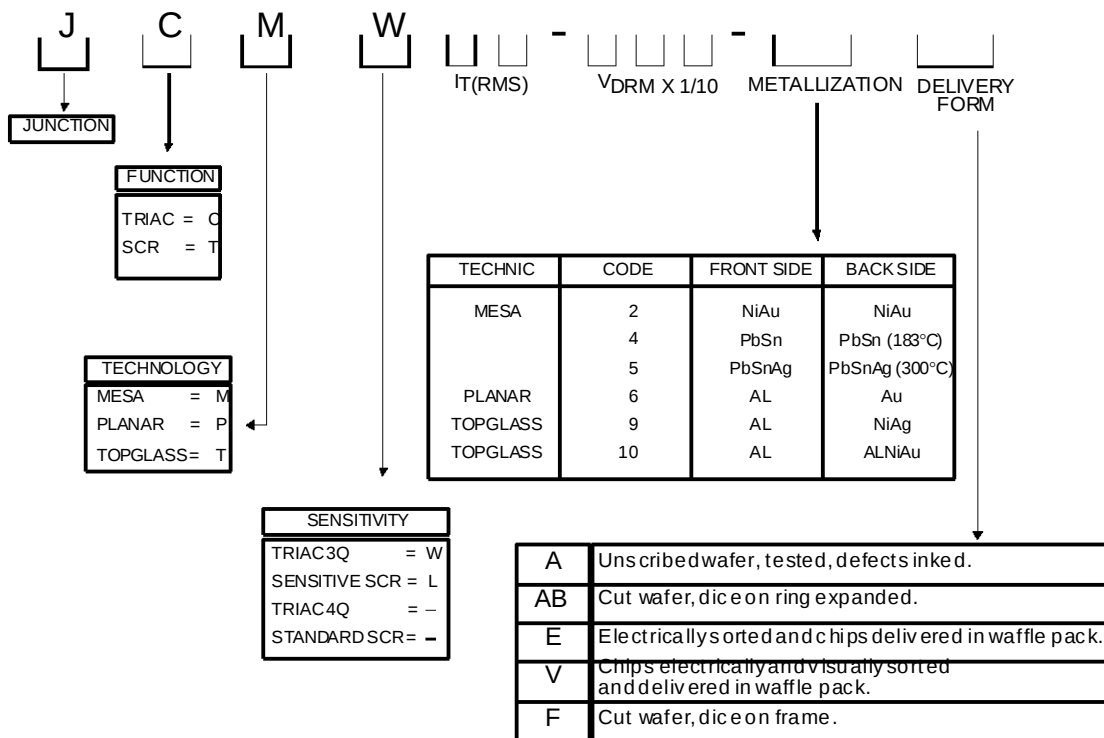


SCR's AND TRIACS

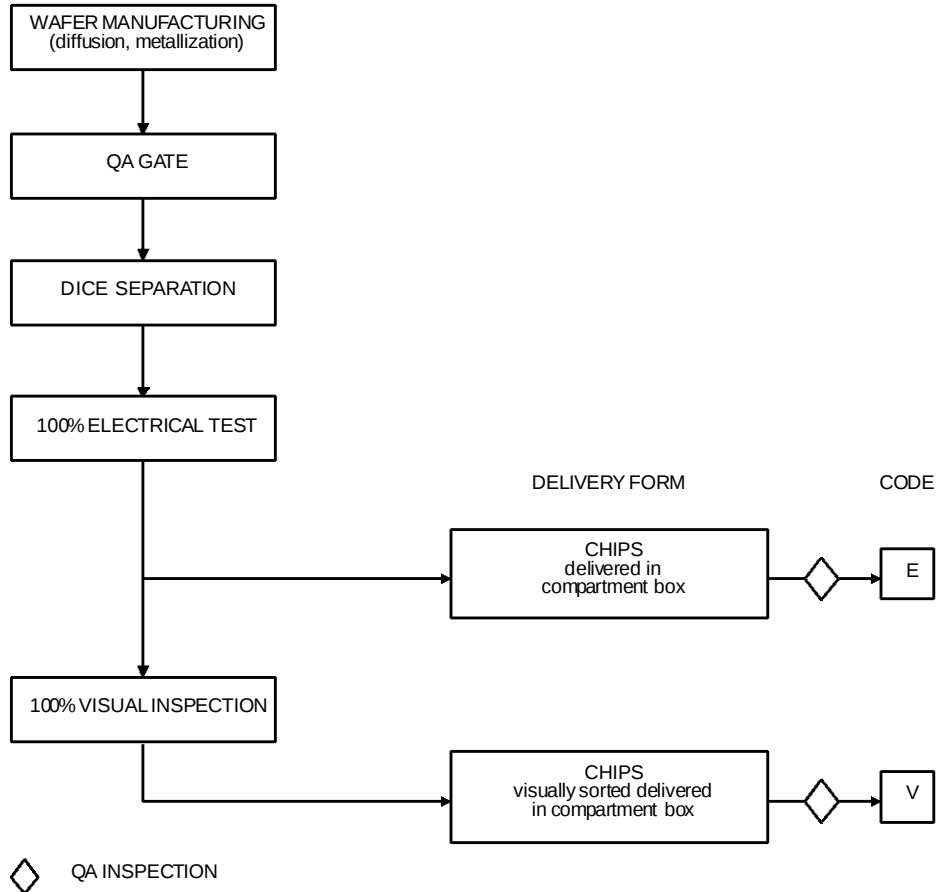
DICE

NEW CODIFICATION



MANUFACTURING FLOW CHART

MESA TECHNOLOGY

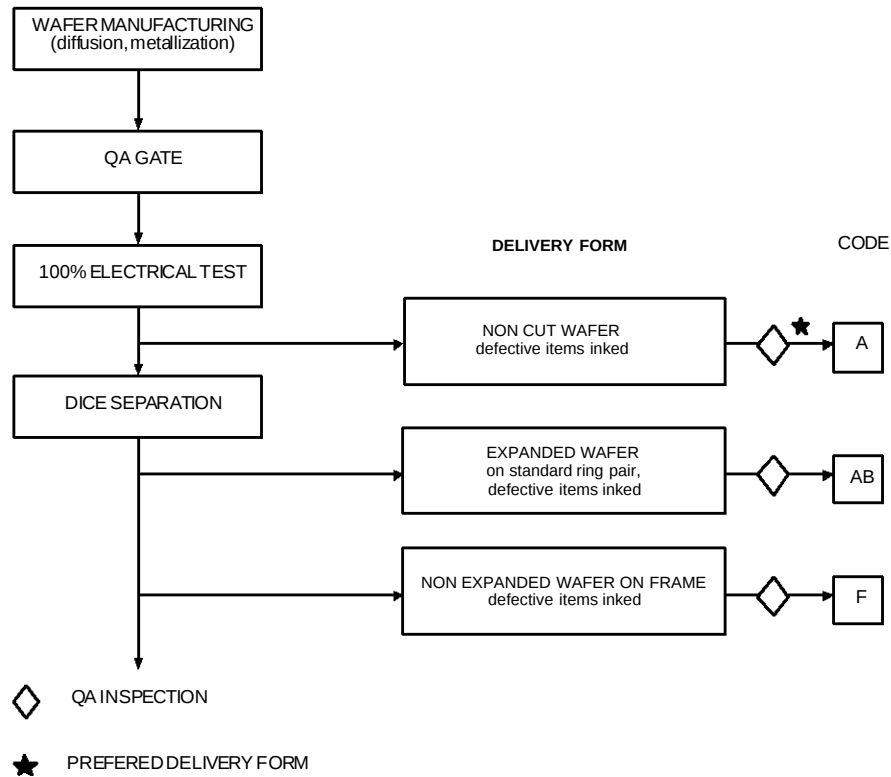


QA inspection is done through sampling for all batches :

SUBGROUP	SAMPLING LEVEL	AQL
VISUAL / MECHANICAL	II	0.40
ELECTRICAL AT 25°C	II	0.40

MANUFACTURING FLOW CHART

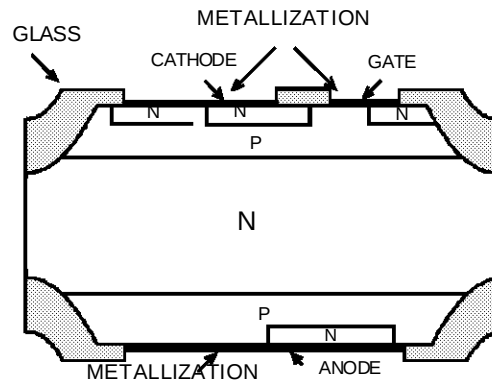
PLANAR AND TOPGLASS TECHNOLOGIES



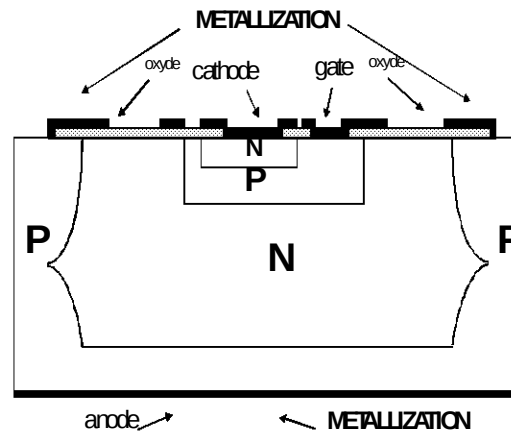
QA inspection is done through sampling for all batches :

SUBGROUP	SAMPLING LEVEL	AQL
VISUAL / MECHANICAL	II	0.40
ELECTRICAL AT 25°C	II	0.40

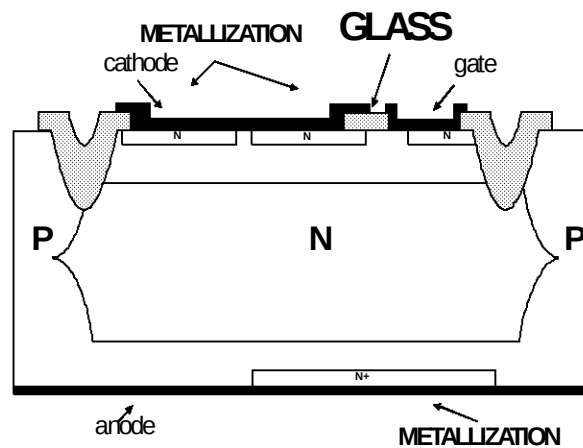
MESA TECHNOLOGY



PLANAR TECHNOLOGY

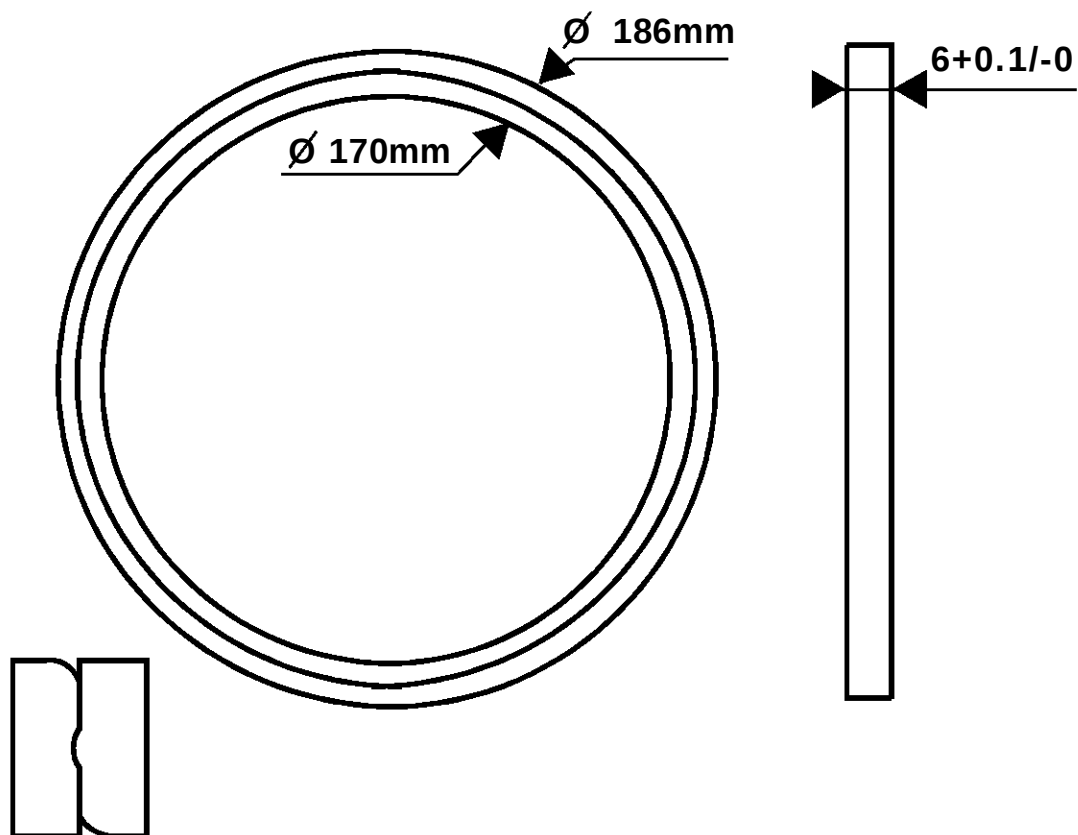


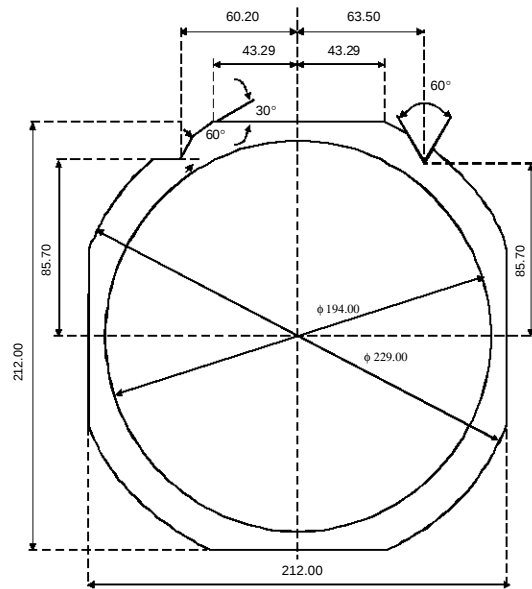
TOPGLASS TECHNOLOGY



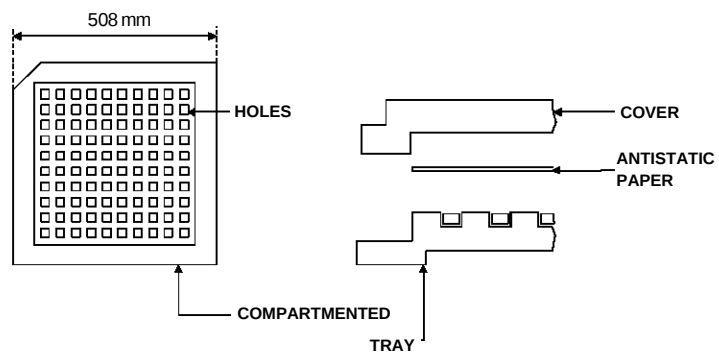
DRAWING

RING PAIR (AB code)



FRAME (F code) - Dimensions in millimeters**COMPARTMENT BOX (V, E code)**

COVER



TRIACS

TECHNOLOGY : MESAGLASS

$V_{DRM}=V_{RRM}$ (V)		200	400	600	800	1000
$I_{T(MS)}$ (A)						
8						
10						
12						
16						
25						
40						
60						

TECHNOLOGY : TOPGLASS

$V_{DRM}=V_{RRM}$ (V)		200	400	600
$I_{T(RMS)}$ (A)				
4				
8				
12				
16				
20				

NOTE : Leakage currents are specified at 50 lux max luminous intensity and at 60% hr max.
For types with $V_{DRM} / V_{RRM} = 1000$ V, I_{DRM} / I_{RRM} are specified on coated chips.

TECHNOLOGY : MESAGLASS

$V_{DRM}=V_{RRM}$ (V)		100	200	400	600	800	1000	1200
$I_{T(RMS)}$ (A)								
3		JTML 03						
4		JTM-04						
10		JTM-10						
16		JTM-16						
20		JTM-20						
30		JTM-30						
45		JTM-45						
70		JTM-70						

TECHNOLOGY : PLANAR / TOPGLASS

$V_{DRM}=V_{RRM}$ (V)		200	400	600
$I_{T(RMS)}$ (A)				
1		JTPL01		
2		JTTL02		
4		JTTL04		

NOTE : Leakage currents are specified at 50 lux max luminous intensity and at 60% hr max.
For types with $V_{DRM} / V_{RRM} = 1000$ V, I_{DRM} / I_{RRM} are specified on coated chips.

* = Preferred

TOP VIEW

$D1$

$D2$

Gate

Diagram illustrating the breakdown of a MESA STANDARD TRIAC part number: J CM - 08 - 060 - 2 E.

- J**: Junction
- CM**: MESA STANDARD TRIAC
- 08**: CURRENT I_T (RMS)
- 060**: $(V_{DRM}) \times 1/10$
- 2**: METALLIZATION
- E**: DELIVERY FORM

TRIACS FOUR QUADRANTS

TYPES	V_{DRM} = V_{RRM} $T_J = 125^\circ\text{C}$ (V)	I_{TSM} max (1) $T_P = 10\text{ms}$ (A)	I_{GT} max (1) QI QII QIII QIV (mA)	$V_{TM}@I_{TM}$ max (1) (V) (A)	dv/dt min at $0.67 \times V_{DRM}$ $T_J = 125^\circ\text{C}$ (V/ μs)	(di/dt)c typ $T_J = 125^\circ\text{C}$ (A/ms)	DICE		
							Thick.	Dim.	Metal.
							μm	(mm) D1xD2	

$I_{T(RMS)} : 25\text{A}$ $I_{DRM}/I_{RRM} = 20 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JCM-25-020	200								
JCM-25-040	400	250	100 100 100 150	2 35	200	13.5	200-600	5.0x5.0	2*-4-5 See § Metal.
JCM-25-060	600								
JCM-25-080	800								

$I_{T(RMS)} : 40\text{A}$ $I_{DRM}/I_{RRM} = 20 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JCM-40-020	200								
JCM-40-040	400	300	100 100 100 150	2 60	200	21.5	200-600	6.35x6.35	2*-4-5 See § Metal.
JCM-40-060	600								
JCM-40-080	800								

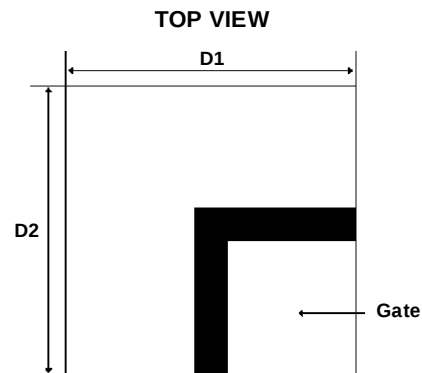
$I_{T(RMS)} : 60\text{A}$ $I_{DRM}/I_{RRM} = 20 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JCM-60-020	200								
JCM-60-040	400	500	100 100 100 150	2 100	200	32	200-600	8.5x8.5	2-4-5* See § Metal.
JCM-60-060	600								
JCM-60-080	800								

(1) : $T_J = 25^\circ\text{C}$

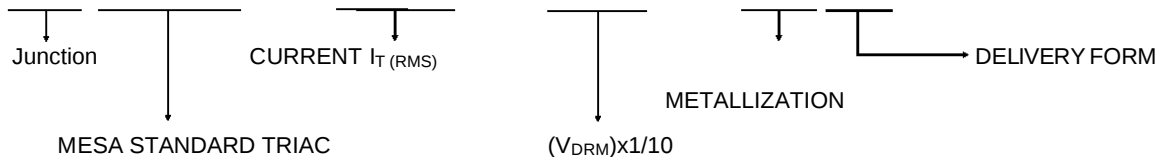
* = Preferred

TECHNOLOGY	MESA	
DELIVERY FORM	E	V
PACKAGING	X	X
Base Qty		
5.0 x 5.0	245 pcs	
6.35 x 6.35	180 pcs	
8.5 x 8.5	80 pcs	



Example :

J	CM	-	25	-	060	-	2	E
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THREE QUADRANTS SNUBBERLESS TRIACS

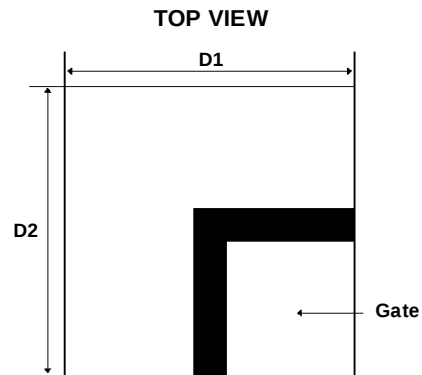
TYPES	V _{DRM} = V _{RRM} T _J = 125°C (V)	I _{TSM} max (1) T _P =10ms (A)	I _{GT} max (1) QI QII QIII (mA)	V _{TM} @I _{TM} max (1) (V) (A)	dv/dt min at 0.67xV _{DRM} T _J =125°C (V/μs)	(di/dt) _c typ T _J = 125°C (A/ms)	DICE		
							Thick.	Dim.	Metal.
							μm	(mm) D1xD2	
I _{T(RMS)} : 8A I _{DRM} /I _{RRM} =10 μA max T _J =25°C									
JCMW08-020 JCMW08-040 JCMW08-060 JCMW08-060	200 400 600 800	80	50 50 50	1.8 11	500	7	200-600	3.0x3.0	2*-4-5 See § Metal.
I _{T(RMS)} : 10A I _{DRM} /I _{RRM} =10 μA max T _J =25°C									
JCMW10-020 JCMW10-040 JCMW10-060 JCMW10-060	200 400 600 800	100	50 50 50	1.75 14	500	9	200-600	3.3x3.3	2*-4-5 See § Metal.
I _{T(RMS)} : 12A I _{DRM} /I _{RRM} =10 μA max T _J =25°C									
JCMW12-020 JCMW12-040 JCMW12-060 JCMW12-060	200 400 600 800	120	100 100 100	1.8 17	500	12	200-600	3.5x3.5	2*-4-5 See § Metal.
I _{T(RMS)} : 16A I _{DRM} /I _{RRM} =10 μA max T _J =25°C									
JCMW16-020 JCMW16-040 JCMW16-060 JCMW16-060	200 400 600 800	160	100 100 100	1.7 22.5	500	14	200-600	4x4	2*-4-5 See § Metal.
I _{T(RMS)} : 25A I _{DRM} /I _{RRM} =20 μA max T _J =25°C									
JCMW25-020 JCMW25-040 JCMW25-060 JCMW25-060 JCMW25-100	200 400 600 800 1000	250	150 150 150	2 35	500	25	200-600	5.0x5.0	2*-4-5 See § Metal.
I _{T(RMS)} : 40A I _{DRM} /I _{RRM} =20 μA max T _J =25°C									
JCMW40-020 JCMW40-040 JCMW40-060 JCMW40-060 JCMW40-100	200 400 600 800 1000	300	150 150 150	2 60	500	40	200-600	6.35x6.35	2-4-5* See § Metal.
I _{T(RMS)} : 60A I _{DRM} /I _{RRM} =20 μA max T _J =25°C									
JCMW60-020 JCMW60-040 JCMW60-060 JCMW60-060 JCMW60-100	200 400 600 800 1000	500	200 200 200	2 100	500	60	200-600	8.5x8.5	2-4-5* See § Metal.

(1) : $T_J = 25^{\circ}\text{C}$

* = Preferred

THREE QUADRANTS SNUBBERLESS TRIACS

TECHNOLOGY	MESA	
DELIVERY FORM	E	V
PACKAGING	X	X
Base Qty		
3.0 x 3.0	500 pcs	
3.3 x 3.3	500 pcs	
3.5 x 3.5	500 pcs	
4.0 x 4.0	320 pcs	
5.0 x 5.0	245 pcs	
6.35 x 6.35	180 pcs	
8.5 x 8.5	80 pcs	
Base Qty	Multiple of min Qty and always ≥ 500 pcs	

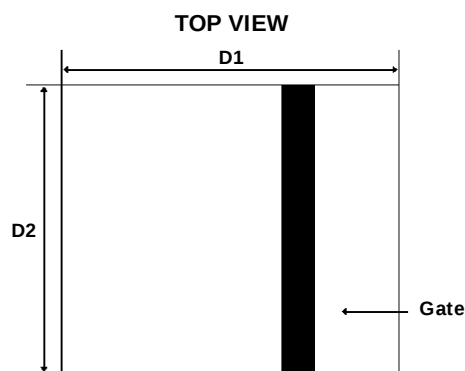


Example :

J	CMW	08	-	060	-	2	E
↓	↓	↓		↓		↓	↓
Junction		CURRENT I_T (RMS)		(V_{DRM})x1/10		METALLIZATION	DELIVERY FORM
	MESA SNUBBERLESS TRIAC						

I _{T(RMS)} : 4A I _{DRM} /I _{RRM} =10 μA max R _{GK} = 1KΩ T _J = 25°C												
JCT-04-020	200	20	10	10	10	2	5.5	100	1.8	210	2x1.6	9
JCT-04-040	400											
JCT-04-060	600											

TECHNOLOGY	TOPGLASS		
DELIVERY FORM	A	AB	F
Max Qty per wafer Ø 4"	2055		
Base unit of delivery	1 wafer		



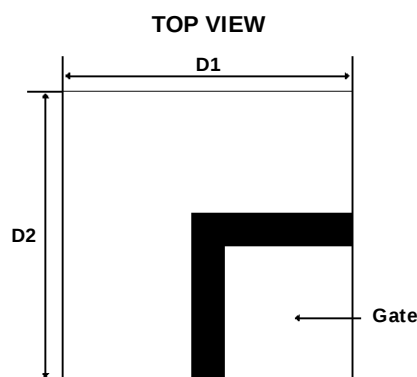
Example :

J	CT	-	04	-	020	-	9	A
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Junction
 CURRENT I_T (RMS)
 TOPGLASS SENSITIVE TRIAC
 METALLIZATION
 DELIVERY FORM
 (V_{DRM})x1/10

TYPES	V _{DRM} = V _{RRM} T _j = 125°C (V)	I _{TSM} max (1) T _P =10ms (A)	I _{GT} max (1) QI QII QIII (mA)	V _{TM@I_{TM}} min (1) (2) (V) (A)	dv/dt min at 0.67xV _{DRM} T _j =125°C (V/μs)	(di/dt)c typ T _j = 125°C (A/ms)	DICE		
							Thick.	Dim.	Metal
							μm typ.	(mm) D1xD2	
I _{T(RMS)} : 4A I _{DRM} /I _{RRM} =10 μA max T _j =25°C									
JCTW04-040 JCTW04-060	400 600	30	35 35 35	1.75 5.5	250	3.5	240	2.6x2.6	10
I _{T(RMS)} : 8A I _{DRM} /I _{RRM} =10 μA max T _j =25°C									
JCTW08-040 JCTW08-060	400 600	60	35 35 35	1.75 11	250	9	240	3.2x3.2	10
I _{T(RMS)} : 12A I _{DRM} /I _{RRM} =10 μA max T _j =25°C									
JCTW12-040 JCTW12-060	400 600	100	3.5 35 35	1.60 17	250	13	240	3.75x3.75	10
I _{T(RMS)} : 16A I _{DRM} /I _{RRM} =10 μA max T _j =25°C									
JCTW16-040 JCTW16-060	400 600	120	35 35 35	1.60 22.5	250	17	240	4.2x4.2	10
I _{T(RMS)} : 20A I _{DRM} /I _{RRM} =10 μA max T _j =25°C									
JCTW20-040 JCTW20-060	400 600	160	35 35 35	1.70 28	250	22	240	4.5x4.5	10

TECHNOLOGY	TOPGLASS		
DELIVERY FORM	A	AB	F
Max. Qty per wafer Ø 4"			
2.6x2.6	984		
3.2x3.2	648		
3.75x3.75	466		
4.2x4.2	363		
4.5x4.5	312		
Base unit of delivery	1 wafer		



J	CTW	12	-	040	-	10	A
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↓ Junction ↓ CURRENT I_T (RMS) ↓ METALLIZATION ↓ DELIVERY FORM

TOPGLASS SNUBBERLESS TRIAC (V_{DRM})x1/10

SENSITIVE SCR's

TYPES	V_{DRM} = V_{RRM} $T_J = 110^\circ\text{C}$ (V)	I_{TSM} max (1) $T_P = 10\text{ms}$ (A)	I_{GT} max (1) (mA)	$V_{TM@I_{TM}}$ max (1) (V) (A)	dv/dt typ at $0.67 \times V_{DRM}$ $T_J = 110^\circ\text{C}$ (V/ μs)
-------	--	--	--------------------------------	--	--

DICE		
Thick.	Dim.	Metal.
μm	(mm) D1xD2	

$I_{T(RMS)} : 3\text{A}$ $I_{DRM}/I_{RRM} = 10 \mu\text{A max}$ $R_{GK} = 1\text{k}\Omega$ $T_J = 25^\circ\text{C}$

JTML03-010	100				
JTML03-020	200	30	0.2	1.8 6	10
JTML03-040	400				
JTML03-060	600				

200-600	2.54X1.8	4 See § Metal.
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(1) : $T_J = 25^\circ\text{C}$

TECHNOLOGY	MESA	
DELIVERY FORM	E	V
Base Qty		
2.54 x 1.8	770 pcs	

Example :

J	TML	03	-	010	-	4	E
↓	↓	↓		↓		↓	↓
Junction		CURRENT $I_T (RMS)$		$(V_{DRM}) \times 1/10$		METALLIZATION	DELIVERY FORM
	MESA SENSITIVE SCR's						

STANDARD SCR's

TYPES	V_{DRM} = V_{RRM} $T_J = 125^\circ\text{C}$ (V)	I_{TSM} max (1) $T_P = 10\text{ms}$ (A)	I_{GT} max (1) (mA)	$V_{TM@I_{TM}}$ max (1) (V) (A)	dv/dt min at $0.67 \times V_{DRM}$ $T_J = 125^\circ\text{C}$ (V/ μs)
-------	--	--	--------------------------------	--	--

$I_{T(RMS)} : 4A$ $I_{DRM}/I_{RRM} = 10 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JTM-04-020	200				
JTM-04-040	400	40	25	1.8 8	100
JTM-04-060	600				
JTM-04-080	800				

$I_{T(RMS)} : 10A$ $I_{DRM}/I_{RRM} = 10 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JTM-10-020	200				
JTM-10-040	400	100	25	1.8 20	100
JTM-10-060	600				
JTM-10-080	800				

$I_{T(RMS)} : 16A$ $I_{DRM}/I_{RRM} = 10 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JTM-16-020	200				
JTM-16-040	400				
JTM-16-060	600	160	25	1.8 32	100
JTM-16-080	800				
JTM-16-100	1000				
JTM-16-120	1200				

(1) : $T_J = 25^\circ\text{C}$

DICE		
Thick.	Dim.	Metal.
μm	(mm) D1xD2	

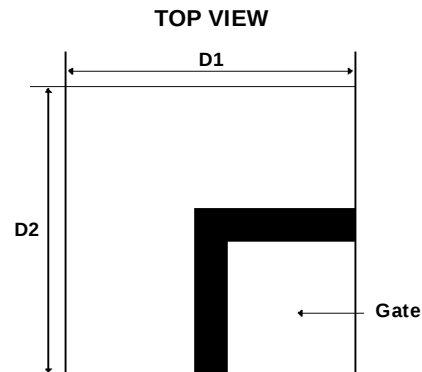
200-600	2.6X2.6	2*-4*-5 See § Metal.
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200-600	2.8x2.8	2*-4*-5 See § Metal.
---------	---------	----------------------------

200-600	3.5x3.5	2*-4*-5 See § Metal.
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* = Preferred

TECHNOLOGY	MESA	
DELIVERY FORM	E	V
Base Qty		
2.6 x 2.6	605 pcs	
2.8 x 2.8	605 pcs	
3.5 x 3.5	500 pcs	



Example :

J	TM	-	04	-	020	-	4	E
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Junction

MESA SCR'S

CURRENT I_T (RMS)

(V_{DRM})x1/10

METALLIZATION

DELIVERY FORM

STANDARD SCR's

TYPES	V_{DRM} = V_{RRM} $T_J = 125^\circ\text{C}$ (V)	I_{TSM} max (1) $T_P = 10\text{ms}$ (A)	I_{GT} max (1) (mA)	$V_{TM}@I_{TM}$ max (1) (V) (A)	dv/dt min at $0.67 \times V_{DRM}$ $T_J = 125^\circ\text{C}$ (V/ μs)
-------	--	--	--------------------------------	--	--

DICE		
Thick.	Dim.	Metal.
μm	(mm) D1xD2	

$I_{T(RMS)} : 20\text{A}$ $I_{DRM}/I_{RRM} = 10 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JTM-20-020	200				
JTM-20-040	400	200	40	1.8 40	100
JTM-20-060	600				
JTM-20-080	800				
JTM-20-100	1000				
JTM-20-120	1200				

200-600	4.42x4.42	2*-4-5 See § Metal.
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$I_{T(RMS)} : 30\text{A}$ $I_{DRM}/I_{RRM} = 20 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JTM-30-020	200				
JTM-30-040	400	300	80	2 60	200
JTM-30-060	600				
JTM-30-080	800				
JTM-30-100	1000				
JTM-30-120	1200				

200-600	5.0x5.0	2*-4-5 See § Metal.
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$I_{T(RMS)} : 45\text{A}$ $I_{DRM}/I_{RRM} = 20 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

JTM-45-020	200				
JTM-45-040	400	400	80	2 90	200
JTM-45-060	600				
JTM-45-080	800				
JTM-45-100	1000				
JTM-45-120	1200				

200-600	6.35x6.35	2-4-5* See § Metal.
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$I_{T(RMS)} : 70\text{A}$ $I_{DRM}/I_{RRM} = 20 \mu\text{A max}$ $T_J = 25^\circ\text{C}$

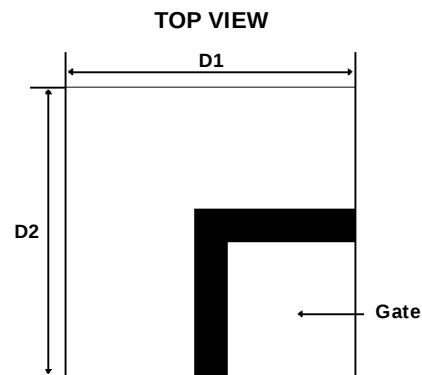
JTM-70-020	200				
JTM-70-040	400	600	150	2 140	200
JTM-70-060	600				
JTM-70-080	800				
JTM-70-100	1000				
JTM-70-120	1200				

200-600	8.5x8.5	2*-4-5 See § Metal.
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(1) : $T_J = 25^\circ\text{C}$

* = Preferred

TECHNOLOGY	MESA	
DELIVERY FORM	E	V
Base Qty		
4.42 x 4.42	245 pcs	
5.0 x 5.0	245 pcs	
6.35 x 6.35	180 pcs	
8.5 x 8.8	80 pcs	



Example :

J	TM	-	30	-	020	-	2	E
↓	↓		↓		↓		↓	↓
Junction			CURRENT I_T (RMS)		METALLIZATION			DELIVERY FORM
	MESA SCR'S				(V_{DRM})x1/10			

SENSITIVE SCR's

TYPES	V_{DRM} = V_{RRM} $R_{GK} = 1K\Omega$ $T_J = 125^\circ C$ (V)	I_{TSM} max (1) $T_P = 10ms$ (A)	I_{GT} max (1) (mA)	$V_{TM@I_{TM}}$ max (1) (V) (A)	dv/dt min at $0.67 \times V_{DRM}$ $T_J = 125^\circ C$ (V/ μs)
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DICE		
Thick.	Dim.	Metal.
μm typ	(mm) D1xD2	

$I_{T(RMS)} : 0.8A$ $I_{DRM}/I_{RRM} = 10 \mu A$ max $R_{GK} = 1K\Omega$ $T_J = 25^\circ C$

JTPL01-020	200				
JTPL01-030	300	7	0.2	2 1.6	25
JTPL01-040	400				

150	0.76x0.76	6
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(1) $T_J = 25^\circ C$

TECHNOLOGY	PLANAR		
DELIVERY FORM	A	AB	F
Max. Qty per wafer $\varnothing 3"$	6370		
Base unit of delivery	1 wafer		

Example :

J	TPL	01	-	040	-	6	A
↓	↓	↓		↓		↓	↓
Junction		CURRENT I_T (RMS)				METALLIZATION	DELIVERY FORM
	PLANAR SENSITIVE SCR's			(V_{DRM})x1/10			

SENSITIVE SCR's

TYPES	V_{DRM} = V_{RRM} $T_J = 125^\circ\text{C}$ (V)	I_{TSM} max (1) $T_P = 10\text{ms}$ (A)	I_{GT} max (1) (mA)	$V_{TM}@I_{TM}$ max (1) (V) (A)	dv/dt $R_{GK} = 1\text{K}\Omega$ Typ at $0.67 \times V_{DRM}$ $T_J = 125^\circ\text{C}$ (V/ μs)
-------	--	--	--------------------------------	--	--

DICE		
Thick.	Dim.	Metal.
μm typ.	(mm) D1xD2	

$I_{T(RMS)} : 2\text{A}$ $I_{DRM}/I_{RRM} = 10 \mu\text{A max}$ $R_{GK} = 1\text{K}\Omega$ $T_J = 25^\circ\text{C}$

JTTL02-020	200				
JTTL02-040	400	20	0.2	1.45 2.5	15
JTTL02-060	600				

210	1.48x1.33	9
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$I_{T(RMS)} : 4\text{A}$ $I_{DRM}/I_{RRM} = 20 \mu\text{A max}$ $R_{GK} = 1\text{K}\Omega$ $T_J = 25^\circ\text{C}$

JTTL04-020	200				
JTTL04-040	400	30	0.2	1.8 8	15
JTTL04-060	600				

210	2x1.6	9
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(1) $T_J = 25^\circ\text{C}$

TECHNOLOGY	TOPGLASS		
DELIVERY FORM	A	AB	F
Max. Qty per wafer $\varnothing 4"$ 1.48x1.33	3400		
2x1.6	2055		
Base unit of delivery	1 wafer		

Example :

J	TTL	02	-	020	-	9	A
↓ Junction	↓ TOPGLASS SENSITIVE SCR's	↓ CURRENT I_T (RMS)		↓ (V_{DRM})x1/10		↓ METALLIZATION	↓ DELIVERY FORM

TYPES	V _{DRM} = V _{RRM} T _J = 125°C (V)	I _{TSM} max (1) T _P =10ms (A)	H _{ET} * max G _{As} source at λ = 945 nm (mw/cm ²)	V _{TM} @I _{TM} typ (1) (V) (A)	dv/dt R _{GK} = 1KΩ min at 0.67xV _{DRM} T _J =125°C (V/μs)	DICE		
						Thick. μm typ.	Dim. (mm) D1xD2	Metal.

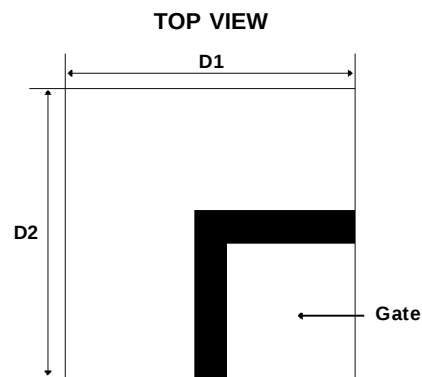
I_{T(RMS)} : 3A I_{DRM}/I_{RRM}=10 μA max R_{GK} = 1KΩ T_J = 25°C

JLO-03-020	200							
JLO-03-040	400	30	70	1.4 3	20	170	1.3x1.3	6

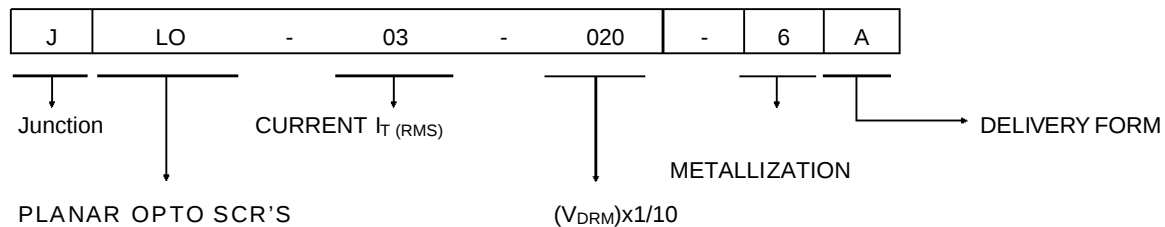
(1) T_J=25°C

TECHNOLOGY	PLANAR	
DELIVERY FORM	A	AB
Max. Qty per wafer Ø 3"		
1.3x1.3	2500	
Base unit of delivery	1 wafer	

* Effective trigger irradiance



Example :



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