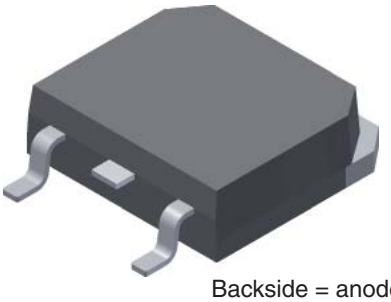
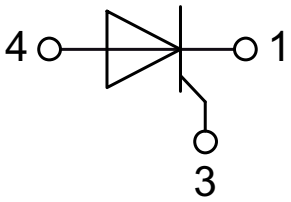
High Voltage
Phase Control Thyristor

V_{DRM} = 2500 V
I_{TSM} = 200 A



Backside = anode



Features / Advantages:

- high voltage thyristor
  - for line frequency
  - chip technology for long term stability
  - planar glass passivated

Applications:

- controlled rectifiers
  - power supplies
  - drives
- AC switches
- capacitor discharge control
  - flash tubes
  - X-ray and laser generators

Package: TO-268AA (D^3Pak)

- Industry standard outline
- RoHS compliant
- Epoxy meets UL 94V-0

Disclaimer Notice

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice Disclaimer Notice at www.littelfuse.com/disclaimer-electronics.

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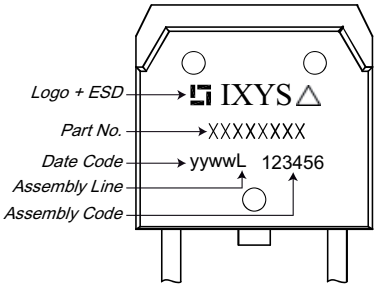
Rectifier				Ratings			
Symbol	Definitions	Conditions		min.	typ.	max.	Unit
$V_{DRM/DSM}$	*max. repetitive/non-repetitive forward blocking voltage*					2500	V
$V_{RRM/RSM}$	*max. repetitive/non-repetitive reverse blocking voltage*					1650	V
$I_{RRM/DRM}$	*max. repetitive off-state current*	$V_R = V_{RRM}$ $V_D = V_{DRM}$	$T_{VJ} = 25°C$ $T_{VJ} = 70°C$			50 200	µA µA
$I_{DSM/RSM}$	*max. non-repetitive off-state current*	$V_R = V_{RSM}$; $V_D = V_{DSM}$	$T_{VJ} = 70°C$			2	mA
I_{TSM}	*max. forward surge current*	t = 10 ms, sine; V_R = 0 V	$T_{VJ} = 25°C$			200	A
$(di/dt)_{cr}$	*critical rate of rise of current*	f = 50 Hz; t_p = 200 µs; V_D = 2000 V di_G/dt = 0.45 A/µs; I_G = 0.45 A non repetitive; I_T = 45 A				150	A/µs
$(dv/dt)_{cr}$	*critical rate of rise of voltage*	V_D = 2200 V $R_{GK} = \infty$; method 1 (linear voltage rise)				5000	V/µs
V_T	*forward voltage drop*	I_T = 45 A	$T_{VJ} = 25°C$			3.0	V
V_{GT} I_{GT}	*gate trigger voltage* *gate trigger current*	V_D = 6 V	$T_{VJ} = 25°C$			2.5 250	V mA
V_{GD} I_{GD}	*gate non-trigger voltage* *gate non-trigger current*	$V_D = {}^2/_3 V_{DRM}$	$T_{VJ} = 25°C$			0.2 5	V mA
I_L	*latching current*	t_p = 10 µs; V_D = 6 V I_G = 0.45 A; di_G/dt = 0.45 A/µs	$T_{VJ} = 0°C$			700	mA
I_H	*holding current*	V_D = 6 V; $R_{GK} = \infty$	$T_{VJ} = 0°C$ $T_{VJ} = 70°C$	 55		300	mA mA
t_q	*turn-off time*	V_R = 10 V; I_T = 20 A; V_D = 800 V di/dt = -20 A/µs; dv/dt = 20 V/µs t_p = 300 µs	$T_{VJ} = 70°C$			100	µs
R_{thJC}	*thermal resistance junction to case*					0.8	K/W
R_{thCH}	*thermal resistance case to heatsink*				0.15		K/W

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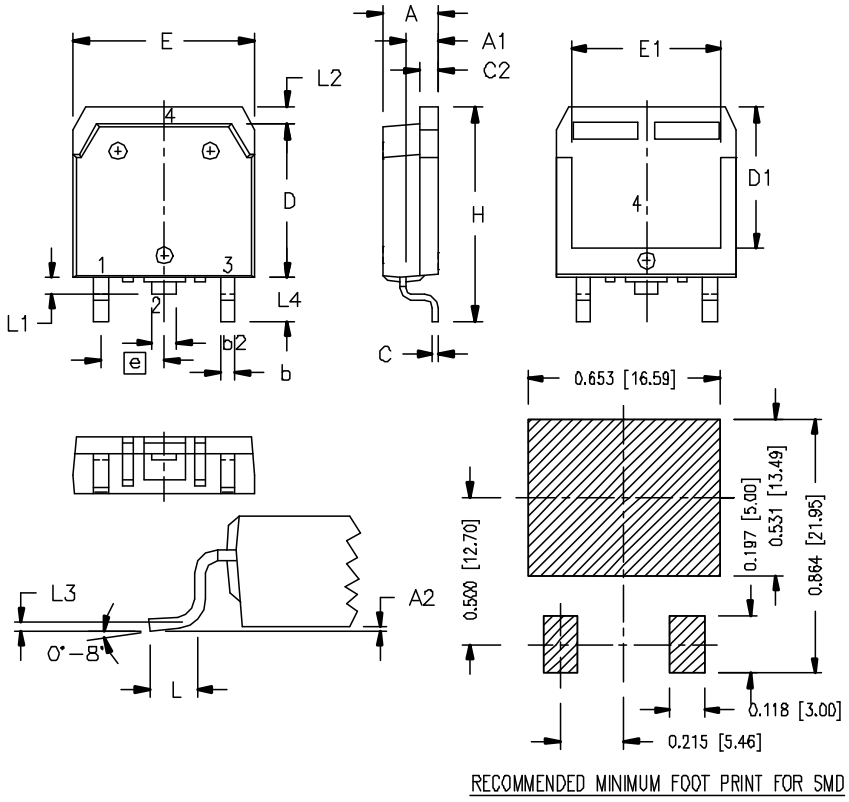
Package TO-268AA (D³Pak)			Ratings			
Symbol	**Definitions**	**Conditions**	**min.**	**typ.**	**max.**	**Unit**
I_{RMS}	*RMS current*	per terminal			70	A
T_{VJ}	*virtual junction temperature*		-10		70	°C
T_{op}	*operation temperature*		-10		70	°C
T_{stg}	*storage temperature*		-40		70	°C
Weight				4		g
F_c	*mounting force with clip*		20		120	N
$d_{Spp/App}$ $d_{Spb/Apb}$	*creepage distance on surface / striking distance through air*	*terminal to terminal* *terminal to backside*	9.4 5.6			mm mm

Product Marking



Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Ordering Code
Standard	CS20-25moT1-TUB	CS20-25moT1	Tube	30	CS20-25moT1-TUB

Outlines TO-268AA (D³Pak)



Dim.	Millimeter		Inches	
	min	max	min	max
A	4.90	5.10	0.193	0.201
A1	2.70	2.90	0.106	0.114
A2	0.02	0.25	0.001	0.100
b	1.15	1.45	0.045	0.057
b2	1.90	2.10	0.075	0.083
C	0.40	0.65	0.016	0.026
C2	1.45	1.60	0.057	0.063
D	13.80	14.00	0.543	0.551
D1	12.40	12.70	0.488	0.500
E	15.85	16.05	0.624	0.632
E1	13.30	13.60	0.524	0.535
e	5.45 BSC		0.215 BSC	
H	18.70	19.10	0.736	0.752
L	2.40	2.70	0.094	0.106
L1	1.20	1.40	0.047	0.055
L2	1.00	1.15	0.039	0.045
L3	0.25 BSC		0.100 BSC	
L4	3.80	4.10	0.150	0.161

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