

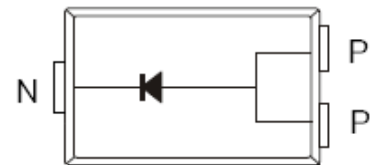
Features

- ◆ Super low VF
- ◆ Low Power loss,high efficiency
- ◆ Fast switching,high frequency
- ◆ High current capability
- ◆ Lead-Free, RoHS Compliant

Application

- ◆ Low Voltage High Frequency Invers Circuit
- ◆ Low Voltage Continued Circuit and Protection Circuit
- ◆ Low Voltage,High Frequency Switching Power Supply

TO-277



Halogen-Free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient Temperature unless otherwise specified.Single phase,half wave,60Hz,resistive or inductive load.For capacitive load,derate current by 20%.

SYMBOL	PARAMETER	Value	UNITS
VRRM	Maximum Recurrent Peak Reverse Voltage	45	V
$V_{R(RMS)}$	RMS Reverse Voltage	31.5	V
$I_{F(AV)}$	Maximum An Voltage	10	A
IFSM	Peak Forward Surge Current: single half sine-wave superimposed on rated load(JEDEC method)	225	A
$R_{\theta JC}$	Typical Thermal Resistance, Junction to Case	3	°C
$R_{\theta JA}$	Typical Thermal Resistance, Junction to Ambient	73	°C/W
Tj,Tstg	Operating and Storage Junction Temperature Range	-55~150	°C

Order Information

Product	Marking	Package	Packaging	Min Unit Quantity
VSW10T45S	10T45	TO-277	5000/Reel	5000

Electronical Characteristic (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Breakdown Voltage	V _{BR}	IR=0.5mA	45	--	--	V	
Forward Voltage	V _F	IF=3A	TA=25°C	--	0.4	0.43	V
			TA=125°C	--	0.34	0.37	V
		IF=5A	TA=25°C	--	0.44	0.47	V
			TA=125°C	--	0.38	0.41	V
		IF=10A	TA=25°C	--	0.49	0.52	V
			TA=125°C	--	0.44	0.47	V
Reverse Current	I _R	VR=45V	TA=25°C	--	36	200	μA
			TA=125°C	--	2.2	20	mA

Typical Characteristic

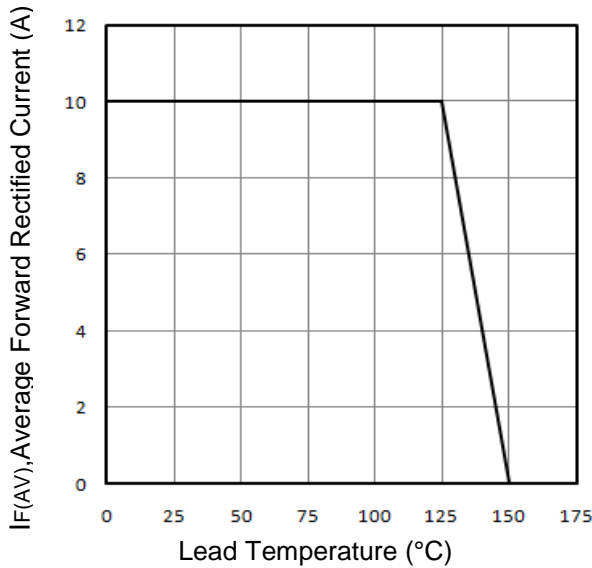


Fig1. Typical Forward Current Derating Curve

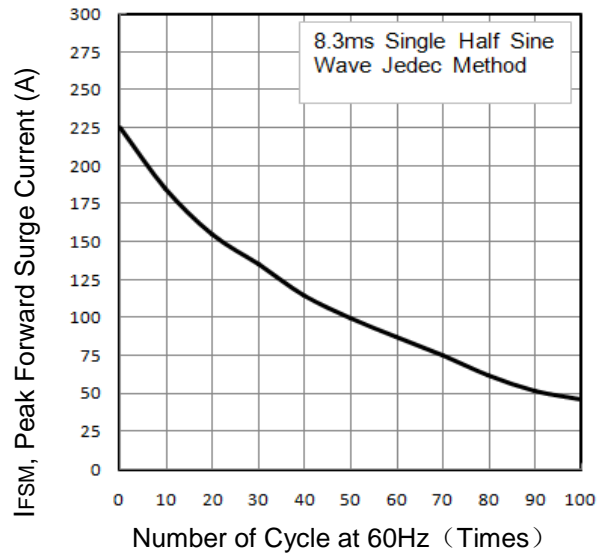


Fig2. Maximum Repetitive Surge Current

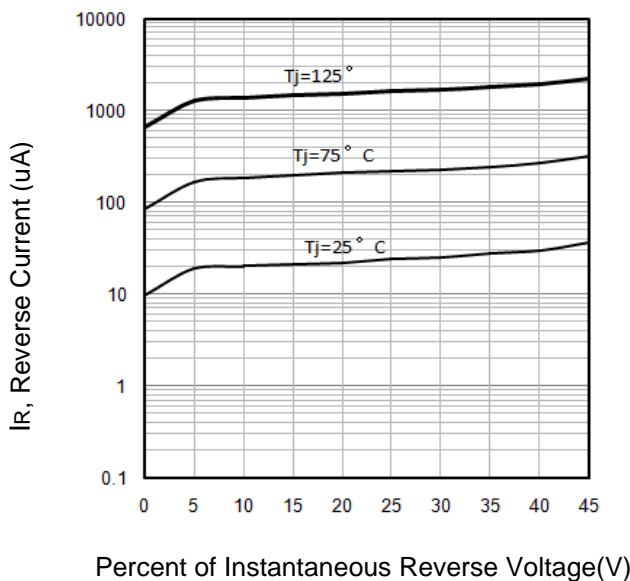


Fig3. Typical Reverse Current Characteristic

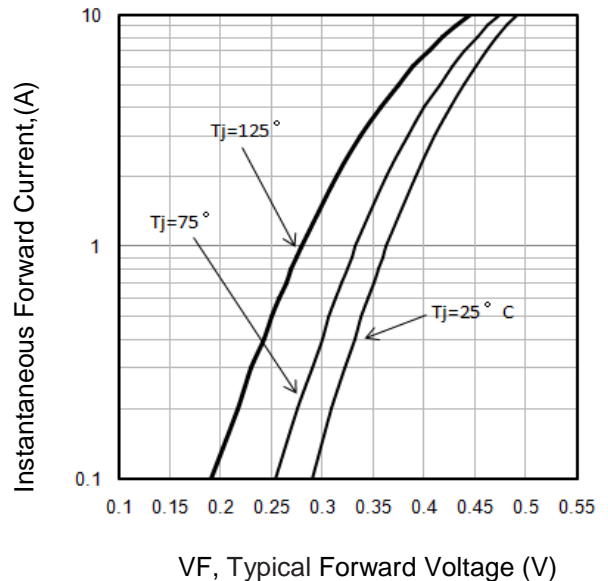
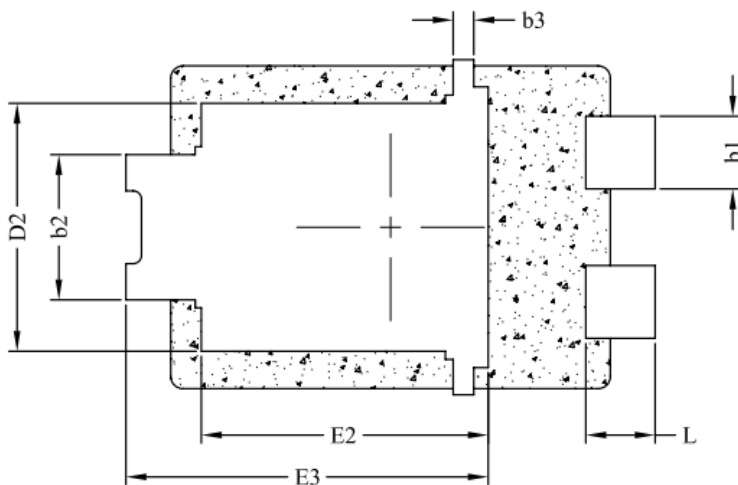
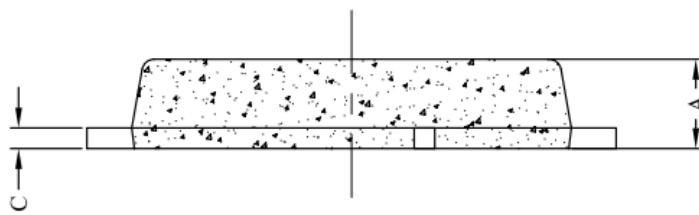
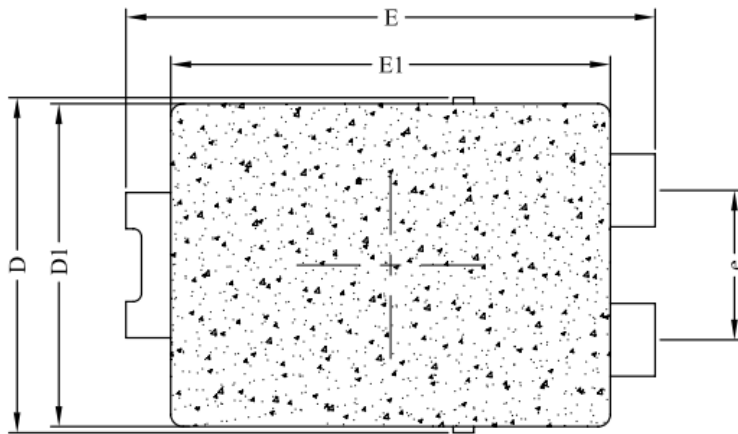


Fig4. Typical Forward Voltage Characteristic

TO277 Package Outline Data



Symbol	DIMENSIONS (unit : mm)		
	Min	Typ	Max
A	1.05	1.10	1.15
b1	0.80	0.90	0.99
b2	1.70	1.79	1.88
b3	0.15	0.25	0.35
C	0.20	0.25	0.33
D	4.00	4.20	4.30
D1	3.90	3.98	4.05
D2	2.95	3.05	3.15
E	6.40	6.50	6.60
E1	5.30	5.40	5.45
E2	3.45	3.55	3.65
E3	4.20	4.40	4.60
e	1.84 Typ		
L	0.75	0.85	0.95

Note:

1. Dimension D1 and E1 do NOT include mold flash, mold flash shall not exceed 0.13mm per side.

Customer Service

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