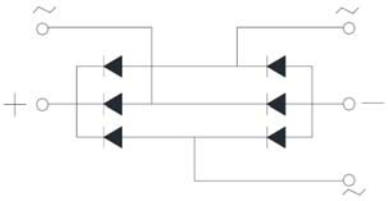
Three Phase Bridge Rectifiers



Features

- UL recognition, file #E230084
- Low thermal resistance
- Glass passivated chip junction
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for Server、Frequency converter、Industrial power supply.

Mechanical Data

- **Package**: MDS35
  Molding compound meets UL 94 V-0 flammability rating
- **Terminals**: Au plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■Maximum Ratings (T_a=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MDS50-16
Device marking code				MDS50-16
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	V	1600
Maximum RMS Voltage		V_{RMS}	V	1120
Maximum DC blocking Voltage		V_{DC}	V	1600
Average rectified output current @60Hz sine wave, R-load	With heatsink Tc =90℃	I_O	A	50
Forward Surge Current (Non-repetitive) @8.3ms Half-sine wave,1 cycle, Tj=25℃		I_{FSM}	A	450
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃				900
Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode		I^2t	A^2s	840
Storage temperature		T_{stg}	℃	-55 ~ +150
Junction temperature		T_j	℃	-55 ~ +150
Dielectric strength @ Terminals to case, AC 1 minute		Vdis	KV	2.5
Mounting torque @Recommend torque：5kg·cm		Tor	kg·cm	8

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MDS50-16
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=25A	1.15
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	T_j =25℃	5
			T_j =125℃	500
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	185

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MDS50-16
Typical Thermal Resistance	Between junction and case, With heatsink	$R_{\theta J-C}$	℃/W	0.5

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MDS50-16	A1	Approximate 17.5	50	50	500	Paper Box

■ Characteristics (Typical)

FIG1:Io-Tc Curve

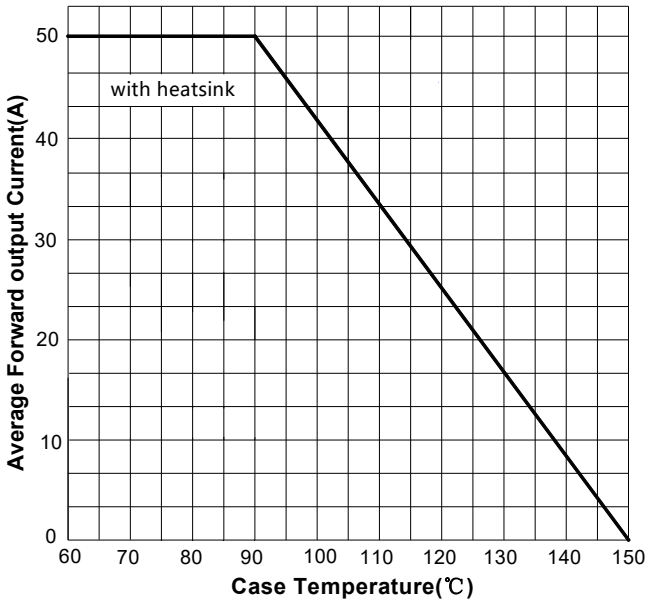


FIG2:Surge Forward Current Capability

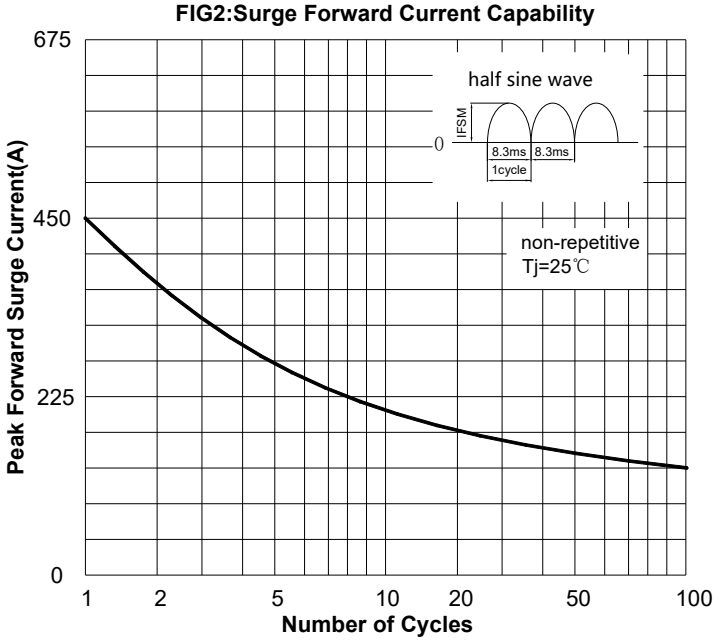


FIG3: Typical Forward Voltage

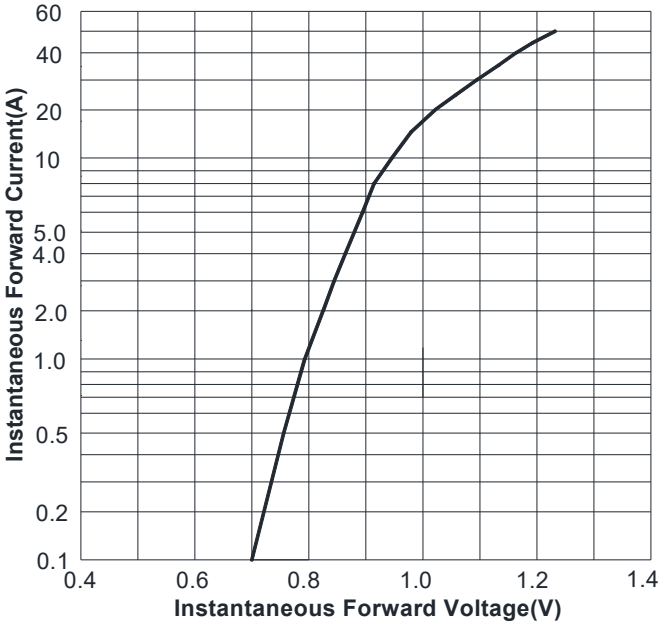
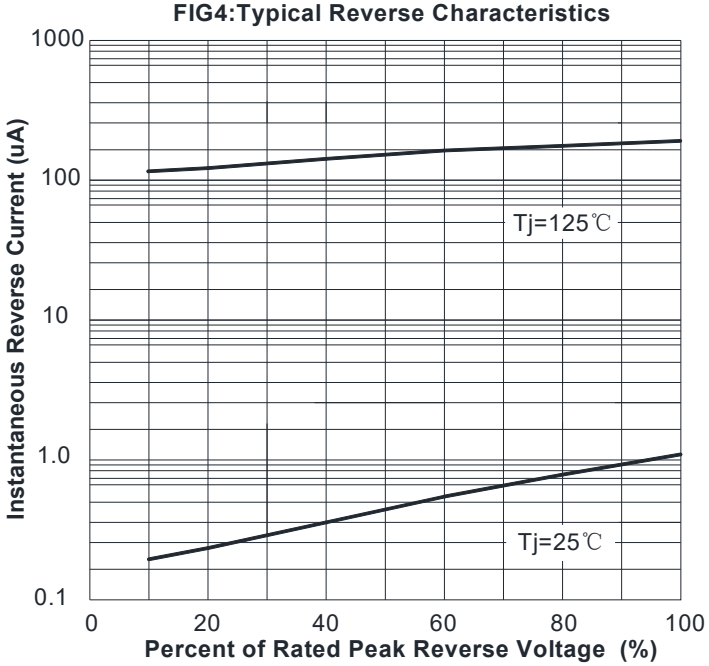
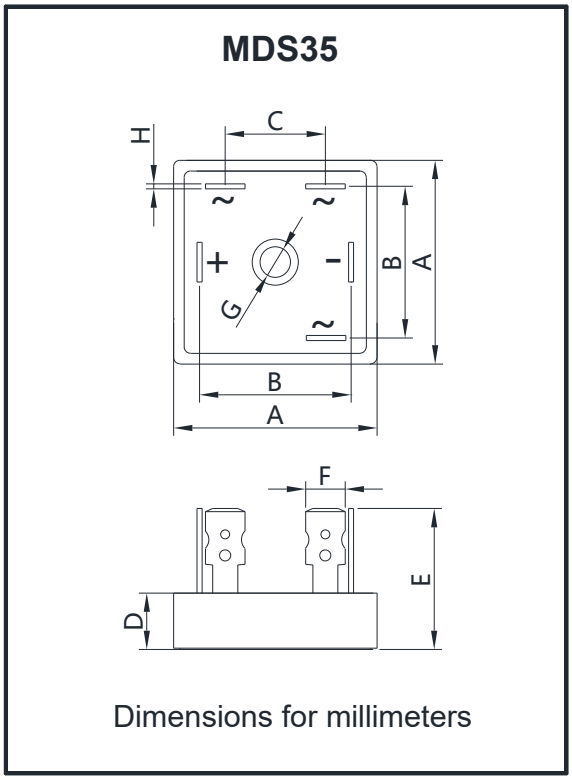


FIG4:Typical Reverse Characteristics



■ Outline Dimensions



MDS35		
Dim	Min	Max
A	32.0	33.0
B	23.7	24.7
C	15.5	16.5
D	8.6	9.4
E	22	24
F	6.2	6.5
G	4.8	5.4
H	0.75	0.85

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