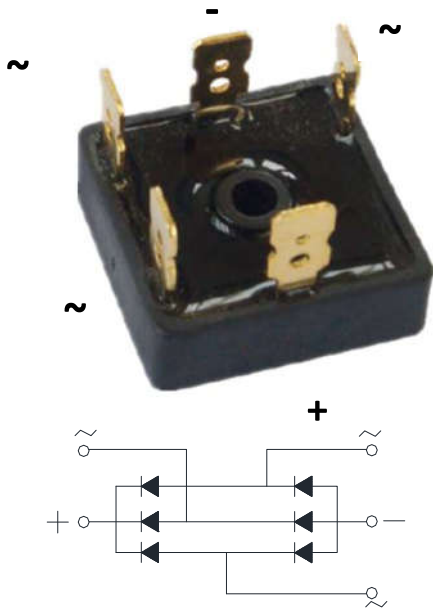


MDS5004 THRU MDS5016

Three Phase Bridge Rectifiers



Features

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

Typical Applications

General purpose use in AC/DC bridge full wave rectification for power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- **Package:** MT
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MDS5004	MDS5006	MDS5008	MDS5010	MDS5012	MDS5014	MDS5016
Device marking code			MDS5004	MDS5006	MDS5008	MDS5010	MDS5012	MDS5014	MDS5016
Repetitive Peak Reverse Voltage	VRRM	V	400	600	800	1000	1200	1400	1600
Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, $T_c=55^\circ\text{C}$	I_O	A	50						
Surge(Non-repetitive)Forward Current @60Hz Half- sine Wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	500						
Current Squared Time @1ms $\leq t \leq 8.3\text{ms}$ $T_j=25^\circ\text{C}$, Rating of per diode	I^2t	A ² S	1040						
Storage Temperature	T_{stg}	$^\circ\text{C}$	-55~+150						
Junction Temperature	T_j	$^\circ\text{C}$	-55~+150						
Dielectric Strength, Terminals to case, AC 1 minute	Vdis	KV	2.5						
Mounting Torque	TOR	kg·cm	10						

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MDS5004	MDS5006	MDS5008	MDS5010	MDS5012	MDS5014	MDS5016
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=25A	1.2						
Maximum DC reverse current at rated DC blocking voltage per diode	IRRM	μA	VRM=VRRM	10						

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MDS5004	MDS5006	MDS5008	MDS5010	MDS5012	MDS5014	MDS5016
Thermal Resistance Between junction and case, With heatsink	$R_{\theta J-C}$	$^\circ\text{C/W}$	0.88						

MDS5004 THRU MDS5016

Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MDS5004~MDS5016	A1	Approximate 17.5	50	50	500	Paper Box

Characteristics (Typical)

FIG1:Io-Tc Curve

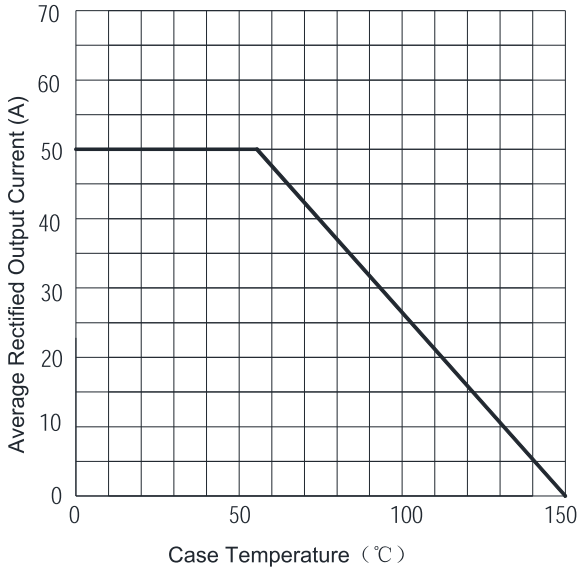


FIG2:Surge Forward Current Capability

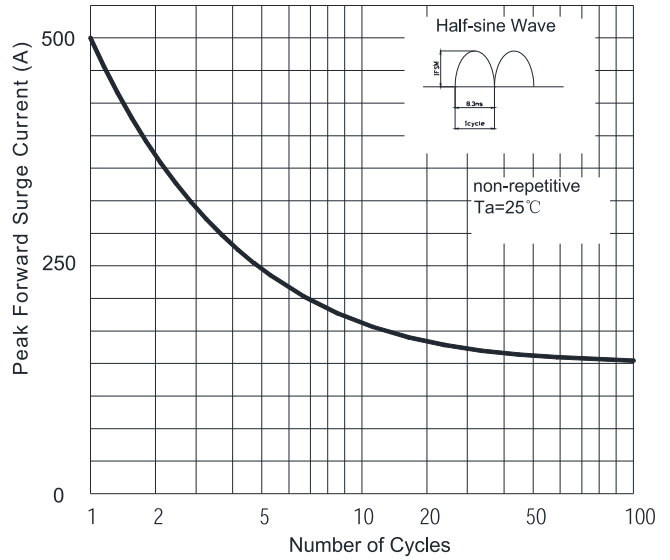


FIG3:Instantaneous Forward Voltage

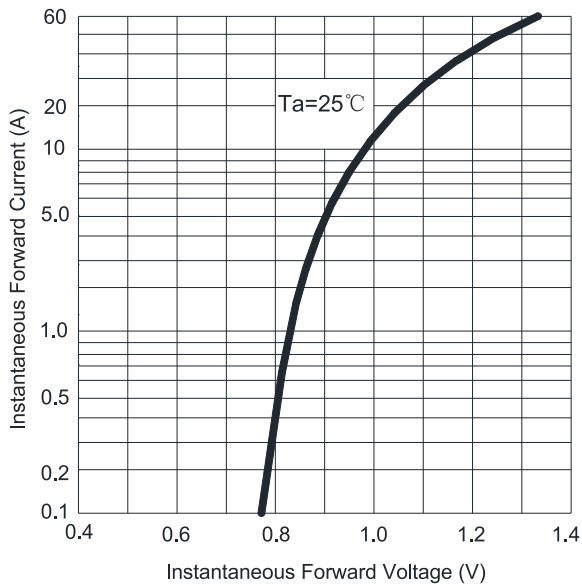
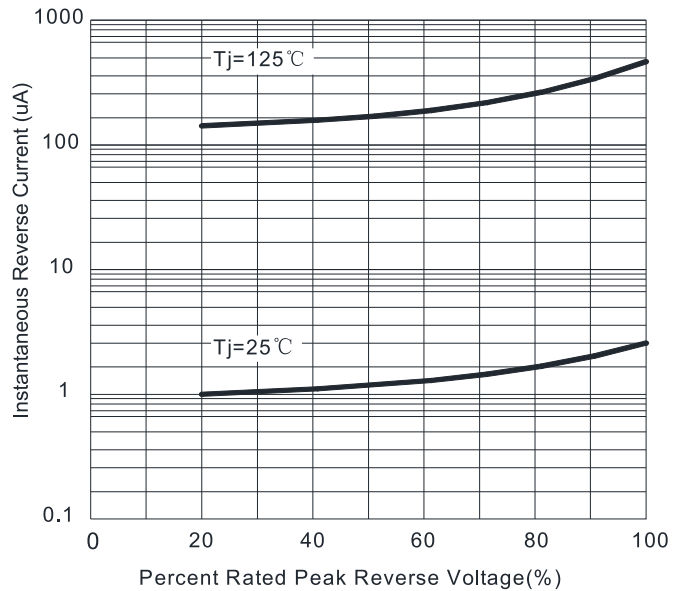
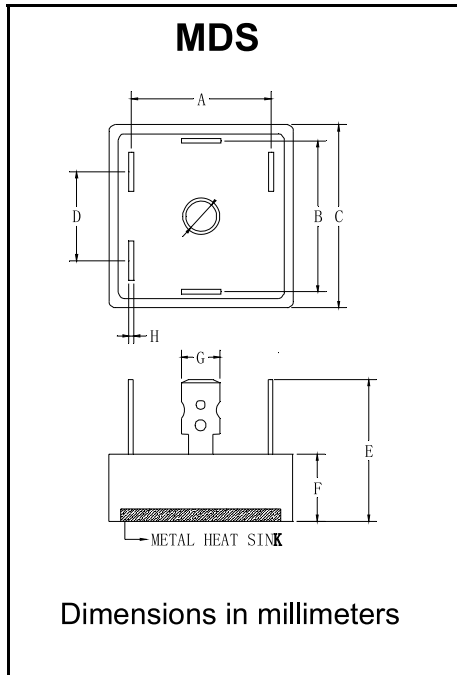


FIG4:Typical Reverse Characteristics



MDS5004 THRU MDS5016

■ Outline Dimensions



MDS		
Dim	Min	Max
A	23.3	24.3
B	23.3	24.3
C	28.2	28.8
D	15.5	16.5
E	/	25
F	9	10
G	6.2	6.4
H	0.75	0.85

MDS5004 THRU MDS5016

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