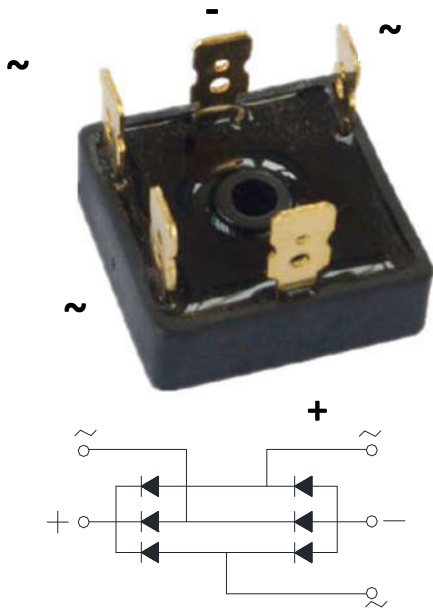


Three Phase Bridge Rectifiers



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:** ST
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	ST5004	ST5006	ST5008	ST5010	ST5012	ST5014	ST5016
Device marking code			ST5004	ST5006	ST5008	ST5010	ST5012	ST5014	ST5016
Repetitive Peak Reverse Voltage	VRRM	V	400	600	800	1000	1200	1400	1600
Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, $T_c=55^\circ\text{C}$	IO	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 8.3ms $T_j=25^\circ\text{C}$, Rating of per diode	I ² t	A ² S	1040						
Storage Temperature	Tstg	°C	-55~+150						
Junction Temperature	Tj	°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	ST5004	ST5006	ST5008	ST5010	ST5012	ST5014	ST5016
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	ST5004	ST5006	ST5008	ST5010	ST5012	ST5014	ST5016
Thermal Resistance Between junction and case, With heatsink	R θ J-C	°C/W	0.88						



ST5004 THRU ST5016

Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ST5004~ST5016	A1	Approximate 17.5	50	50	500	Paper Box

Characteristics (Typical)

FIG1:Io-Tc Curve

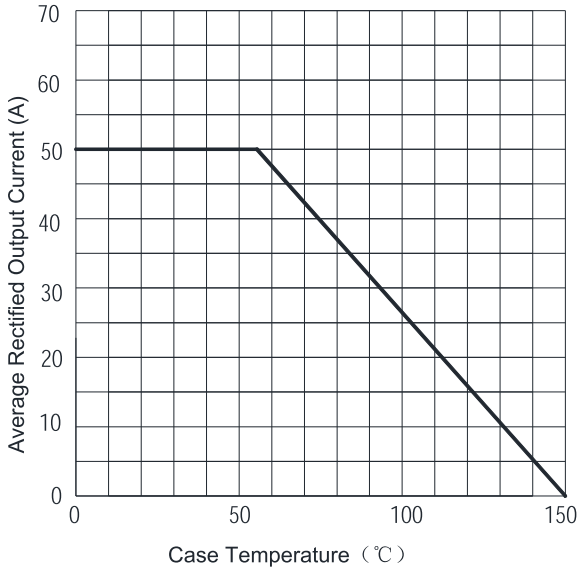


FIG2:Surge Forward Current Capability

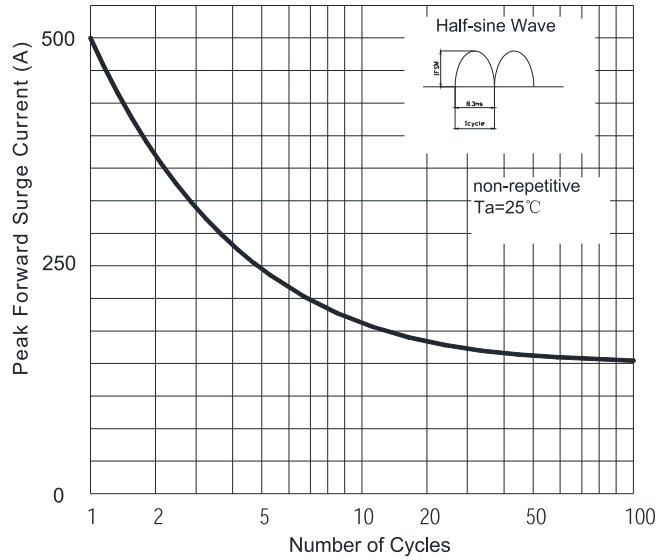


FIG3:Instantaneous Forward Voltage

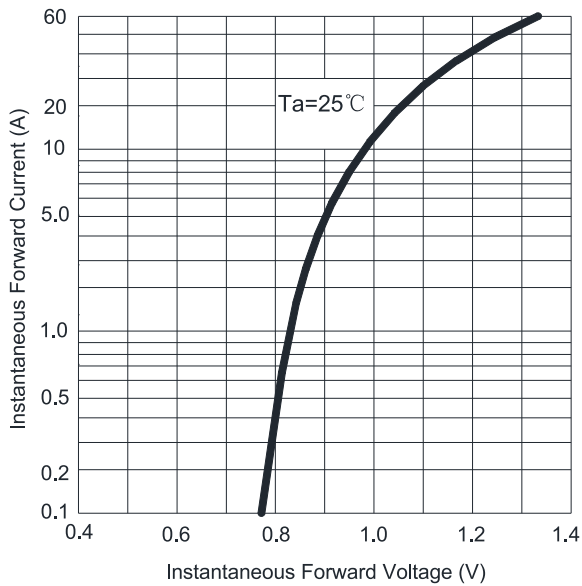
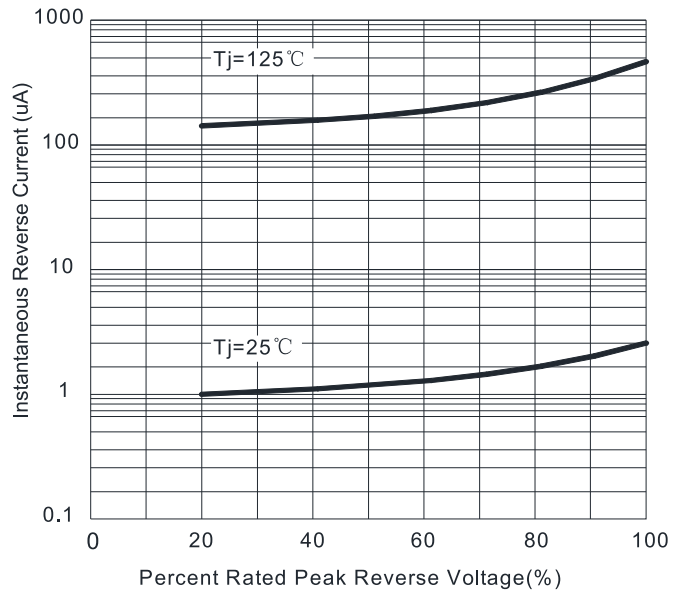
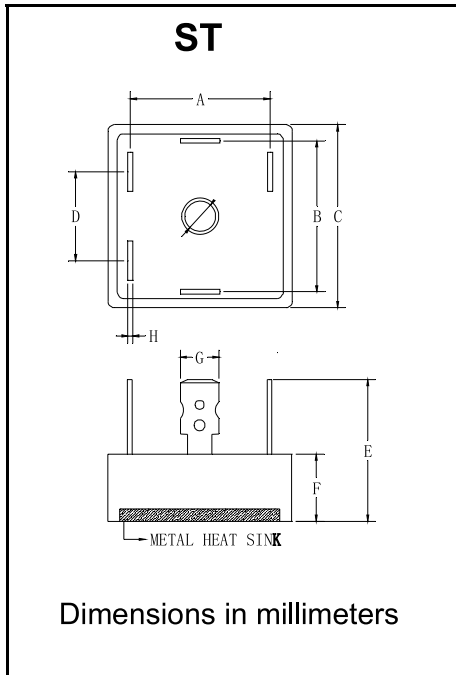


FIG4:Typical Reverse Characteristics



■ Outline Dimensions



ST		
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



ST5004 THRU ST5016

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