Schottky Diodes

Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260℃

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical data

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

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

PARAMETER	SYMBOL	UNIT	GFS2045
Device marking code			GFS2045
Repetitive Peak Reverse Voltage	V_{RRM}	V	45
Average Rectified Output Current @60Hz half sine-wave, R-load, Ta=25℃	Io	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25℃	IFSM	A	300
Current Squared Time @1ms≤t<8.3ms Tj=25℃	I^2t	A^2s	375
Storage Temperature	Tstg	℃	-55 ~+150
Junction Temperature IN DC Forward Mode-Forward Operations，without reverse bias, t ≤1 h (Fig. 1)①	Tj	℃	-55 ~+200

NOTE

① Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GFS2045
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=20.0A	0.55
Maximum DC reverse current at rated DC blocking voltage per diode	IRRM1	mA	VRM=VRRM Ta=25℃	0.5
	IRRM2		VRM=VRRM Ta=100℃	50

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

PARAMETER		SYMBOL	UNIT	GFS2045
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	1.3

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GFS2045	Approximate 0.9	80	4000	12000	Tube

■Characteristics (Typical)

FIG1:Io -Tc Curve

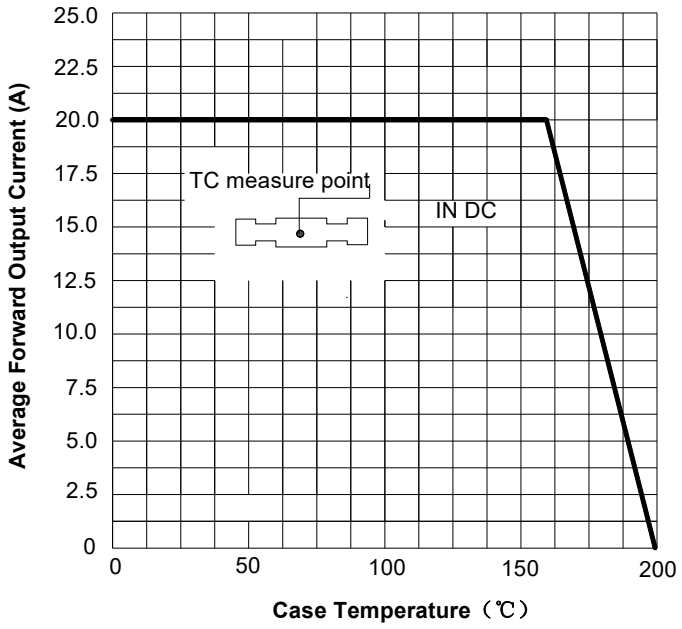


FIG2:Surge Forward Current Capability

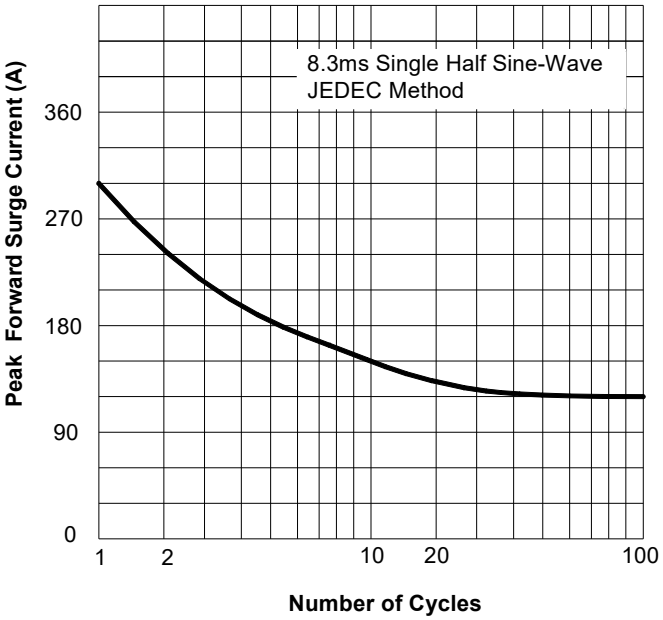


FIG3: Forward Voltage

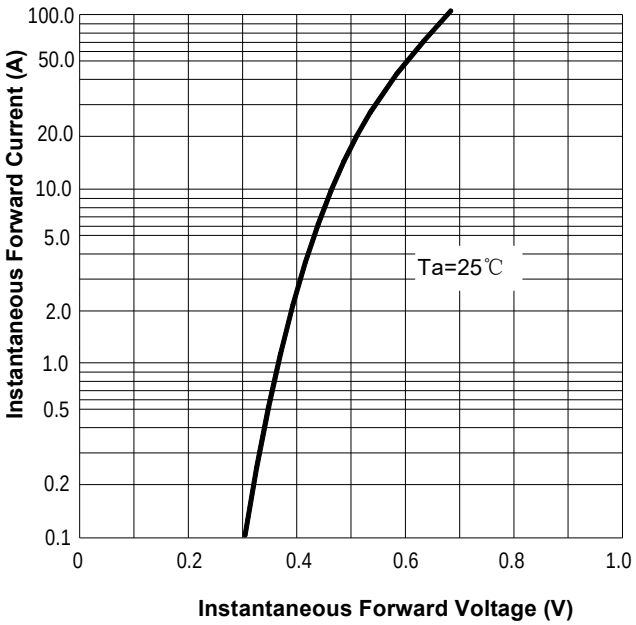
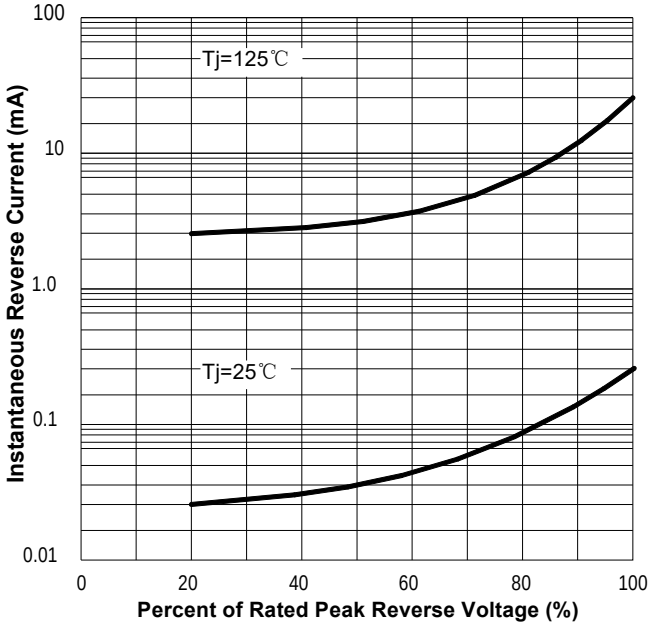
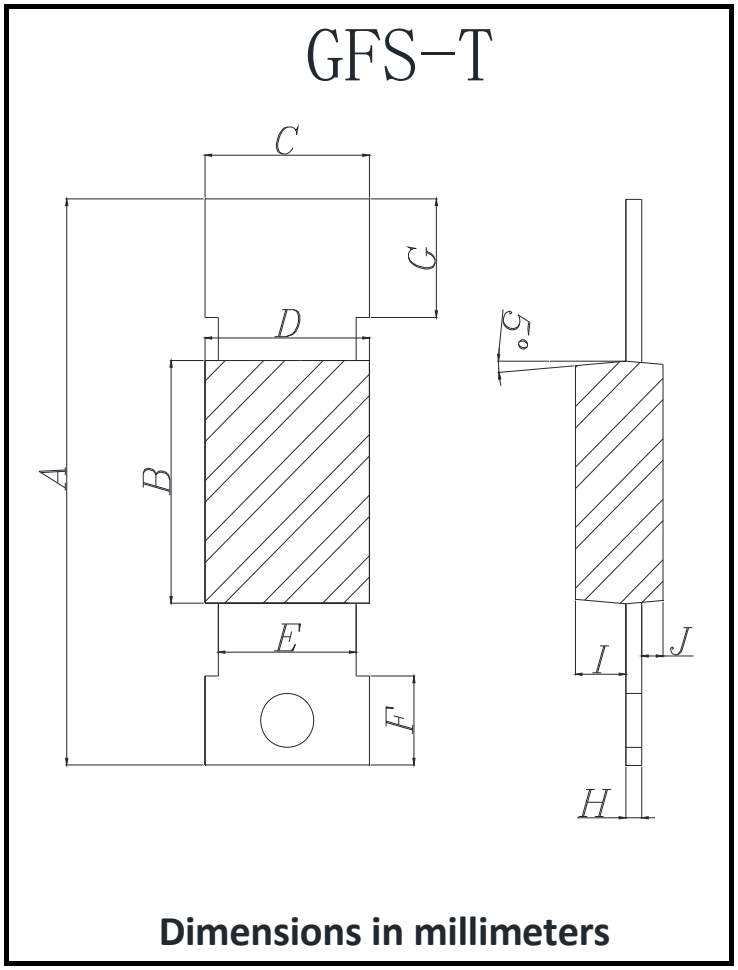


FIG4: Typical Reverse Characteristics



■Outline Dimensions



GFS-T		
Dim	Min	Max
A	20.7	21.3
B	8.7	9.3
C	5.9	6.5
D	5.9	6.5
E	4.9	5.5
F	2.9	3.5
G	3.9	4.5
H	0.5	0.7
I	1.6	2.2
J	0.5	1.1

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