

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°C

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 (T_a=25°C Unless otherwise specified)

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

NOTE

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

■Electrical Characteristics (T_a=25°C 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 T _a =25°C	0.5
	IRRM2		VRM=VRRM T _a =100°C	50



GFS2045

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	GFS2045
Thermal Resistance	Between junction and case	R _{θJ-C}	°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: I_o -T_c Curve

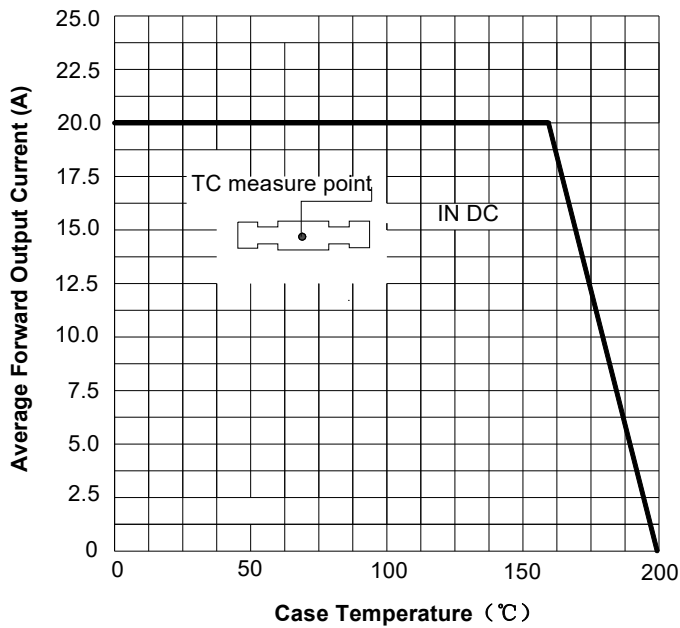


FIG2: Surge Forward Current Capability

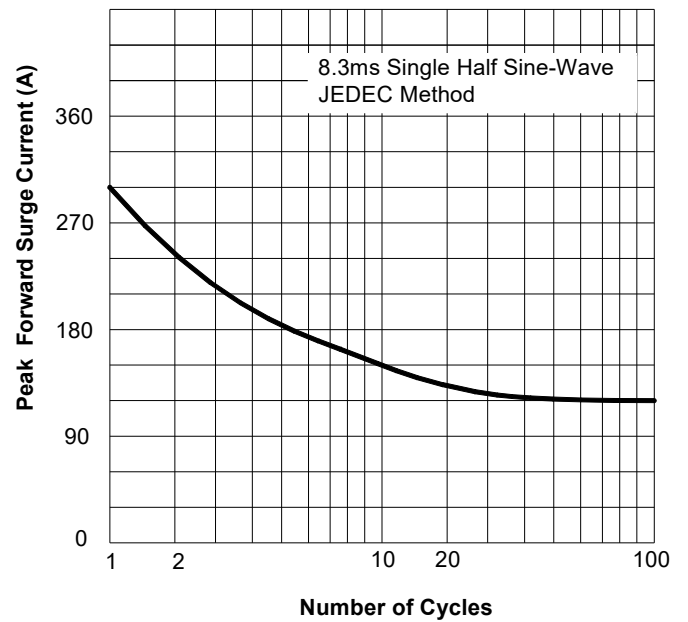


FIG3: Forward Voltage

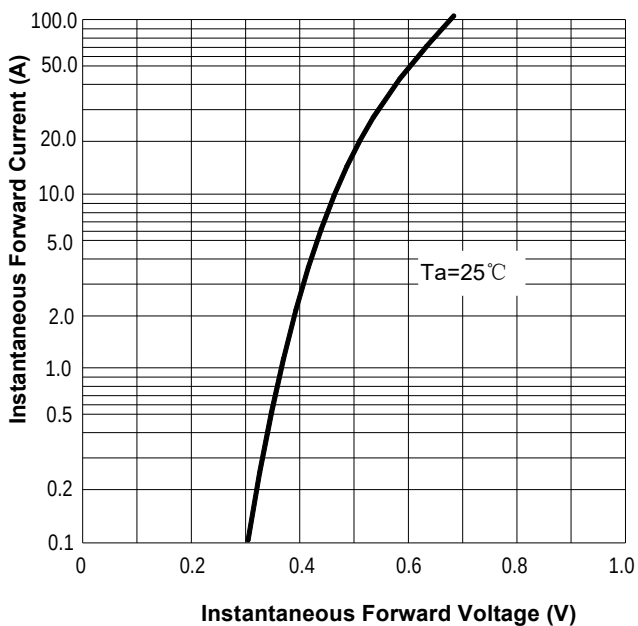
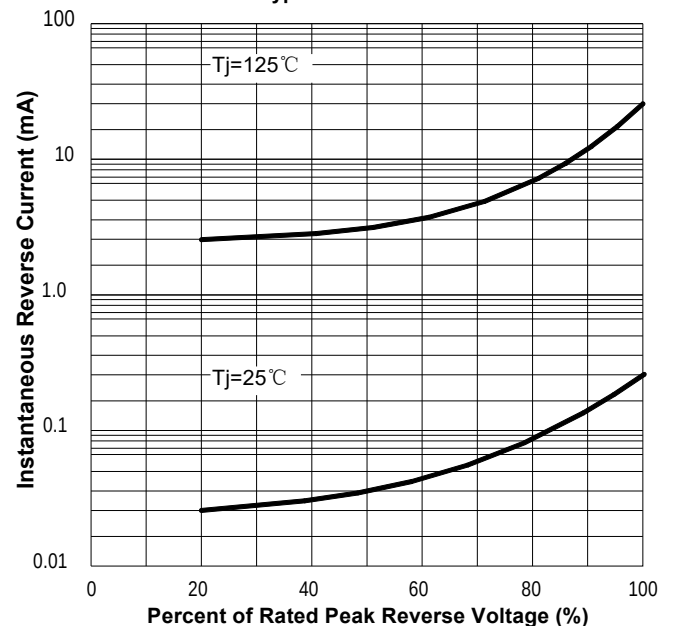
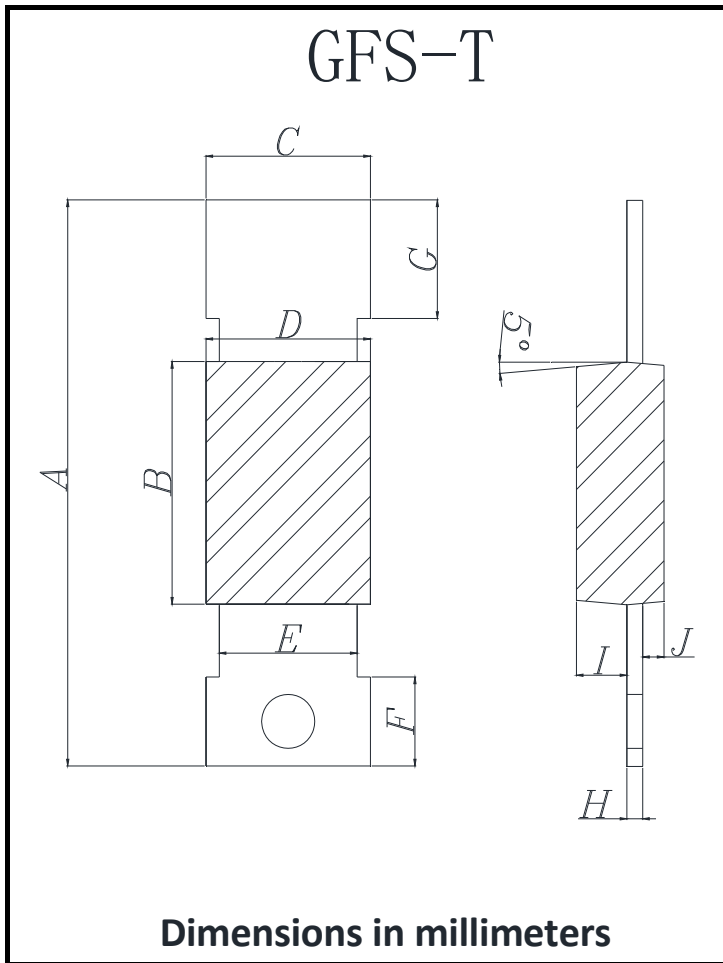


FIG4: Typical Reverse Characteristics



■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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