

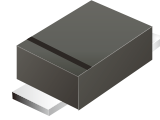
CGRTS4001-HF Thru. CGRTS4007-HF

Reverse Voltage: 50 to 1000 V

Forward Current: 1.0 A

RoHS Device

Halogen Free



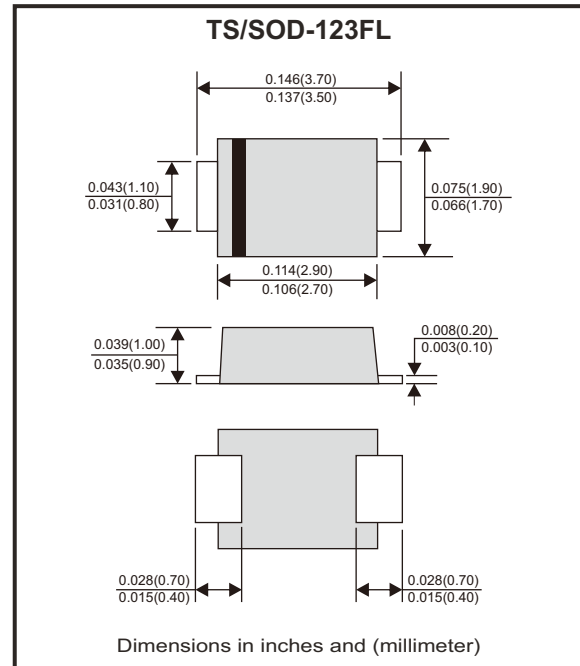
Features

- Ideal for surface mount applications.
- Easy pick and place.
- Low leakage current.
- Meets MSL Level 1, per J-STD-020, LF maximum peak of 260°C.

Mechanical data

- Epoxy: UL94V-0 rated flame retardant.
- Case: Molded plastic, SOD-123FL.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.

Circuit Diagram



Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	CGRTS							Unit
		4001-HF	4002-HF	4003-HF	4004-HF	4005-HF	4006-HF	4007-HF	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum averaged forward current	I_O	1.0							A
Maximum Instantaneous forward voltage $I_F=1.0A$ @ 25°C	V_F	1.0							V
Non-repetitive forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Reverse current at rated DC blocking voltage	@ $T_J=25^\circ\text{C}$	10							μA
	@ $T_J=100^\circ\text{C}$								
Typical thermal resistance, Junction to ambient (Note1)	$R_{\theta JA}$	75							$^\circ\text{C/W}$
Operating junction temperature	T_J	-65 to +150							$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +175							$^\circ\text{C}$
Typical junction capacitance $f=1\text{MHz}$ and applied 4V DC reverse voltage	C_J	6							pF

Notes: 1. Thermal resistance from junction to ambient on FR4 PC board, 1"x1", 2 oz. Copper pad areas.

Typical Rating and Characteristic Curves (CGRTS4001-HF Thru. CGRTS4007-HF)

Fig.1 - Typical Current Derating Curve

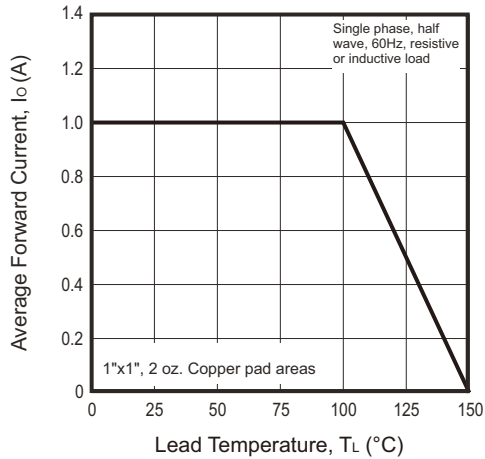


Fig.2 - Typical Forward Characteristics

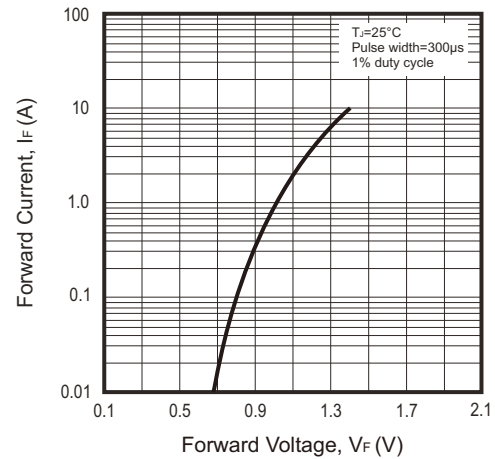


Fig.3 - Non-repetitive Forward Surge Current

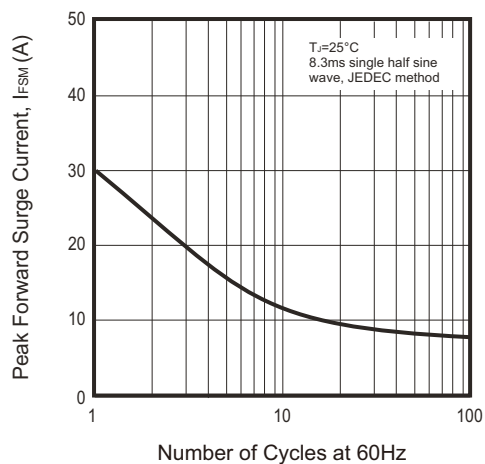


Fig.4 - Typical Reverse Characteristics

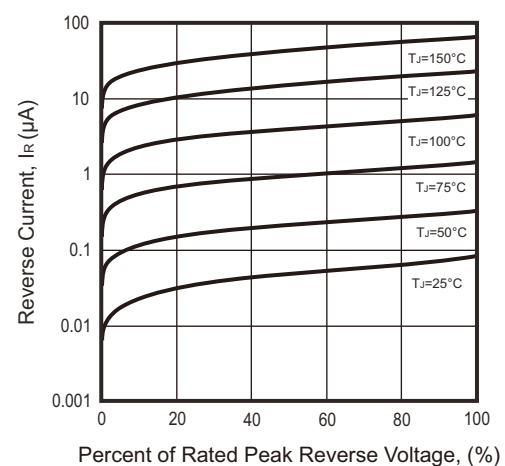
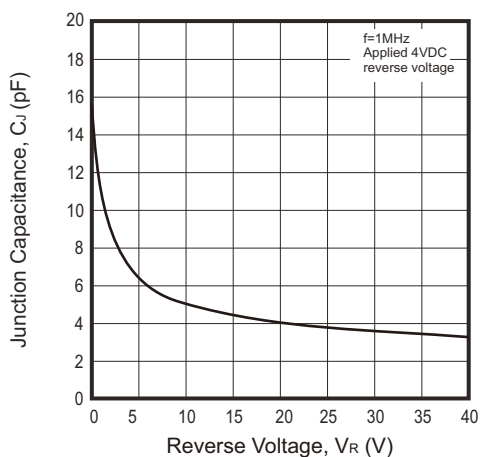
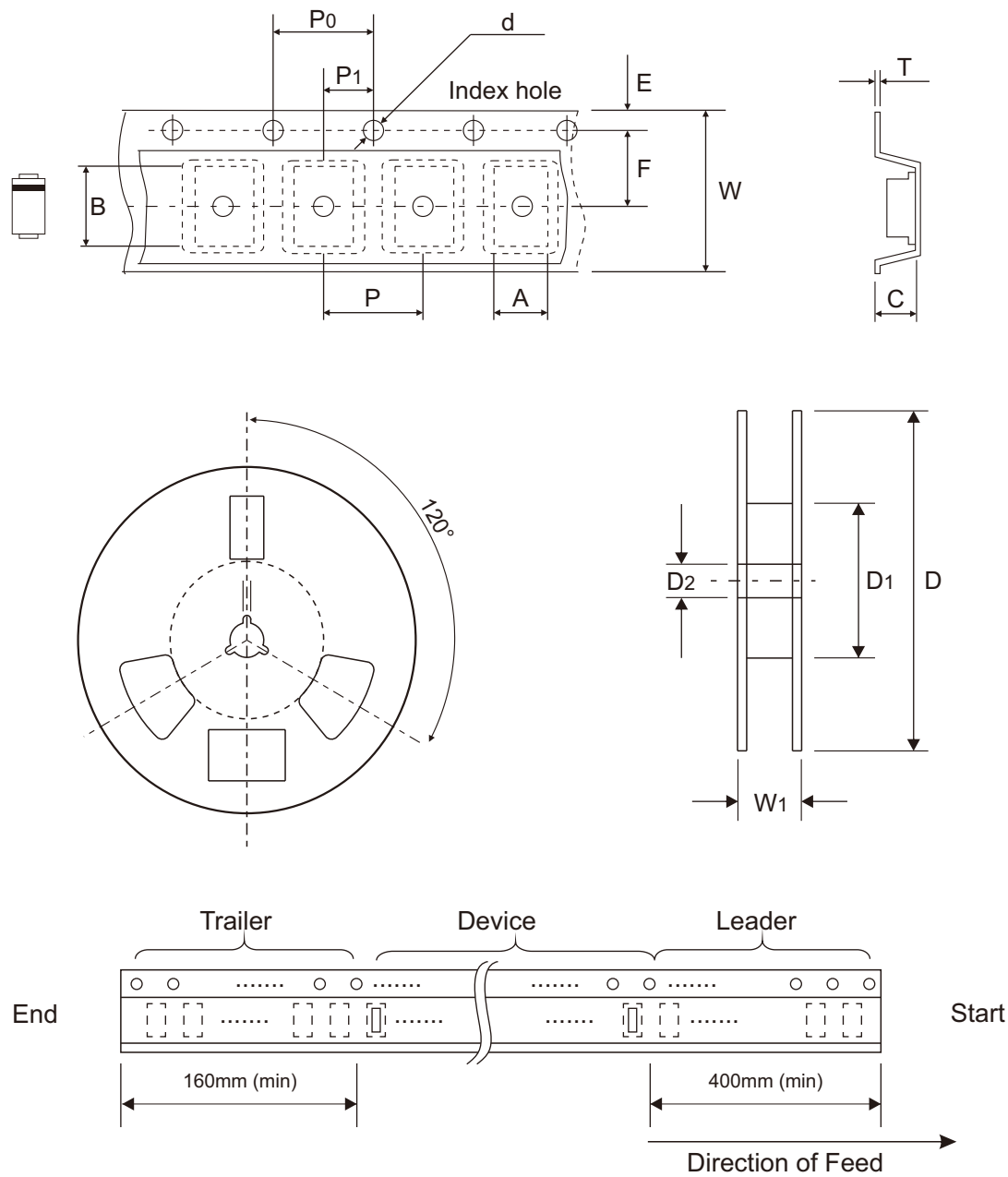


Fig.5 - Typical Junction Capacitance



Reel Taping Specification

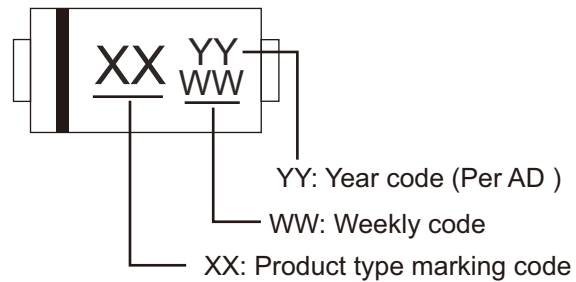


TS/ SOD-123FL	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.05 ± 0.10	3.85 ± 0.10	1.25 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.081 ± 0.004	0.152 ± 0.004	0.049 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

TS/ SOD-123FL	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.05	8.00 ± 0.30	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 ± 0.012	0.472 + 0.020 - 0.000

Marking Code

Part Number	Marking Code
CGRTS4001-HF	A1
CGRTS4002-HF	A2
CGRTS4003-HF	A3
CGRTS4004-HF	A4
CGRTS4005-HF	A5
CGRTS4006-HF	A6
CGRTS4007-HF	A7



- Year Code: The last two number, AD 2017=17
- Weekly Code: 01~xx(The fast week~final week)

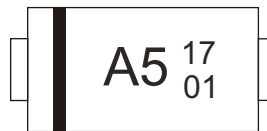
Product code printed

For example as follows:

P/N: CGRTS4005-HF

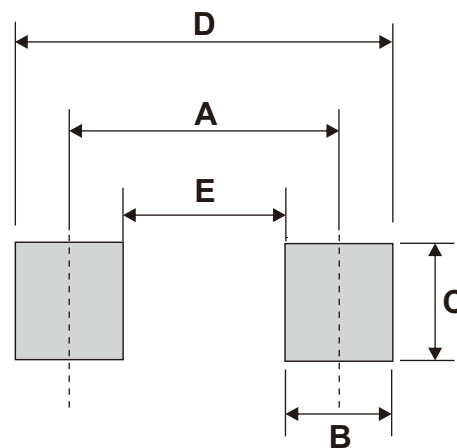
Manufacture date_ Year: 2017 / Weekly:01

Product code printed:



Suggested P.C.B. PAD Layout

SIZE	TS/SOD-123F	
	(mm)	(inch)
A	3.10	0.122
B	1.15	0.045
C	1.25	0.048
D	4.25	0.167
E	1.95	0.077



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
TS/SOD-123FL	3,000	7