

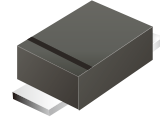
## CGRTS4001-HF Thru. CGRTS4007-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

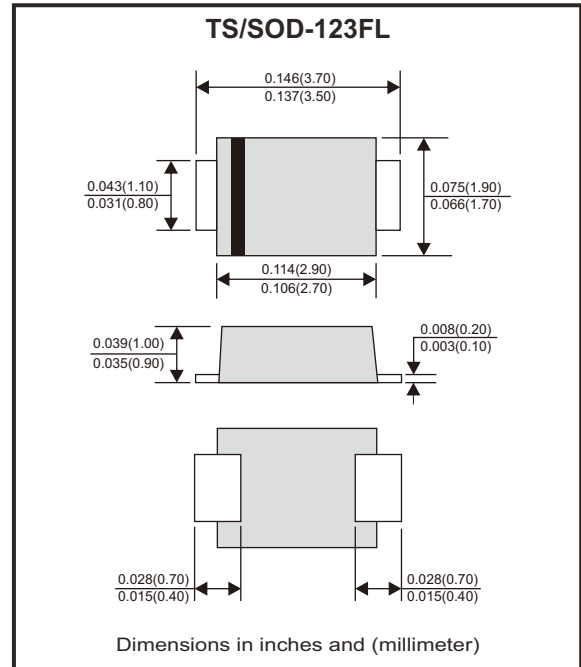


### Features

- 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
- Weight: 0.014 grams approx.



### Circuit diagram



### Maximum Ratings (at T<sub>A</sub>=25°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 <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Maximum averaged forward current	I <sub>O</sub>	1.0							A	
Maximum Instantaneous forward voltage I <sub>F</sub> =1.0A @ 25°C	V <sub>F</sub>	1.0							V	
Non-repetitive forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30							A	
Reverse current at rated DC blocking voltage	I <sub>R</sub>	@T <sub>J</sub> =25°C	10							μA
		@T <sub>J</sub> =100°C	50							
Typical thermal resistance, Junction to ambient (Note 1)	R <sub>θJA</sub>	75							°C/W	
Operating junction temperature	T <sub>J</sub>	-55 to +150							°C	
Storage temperature range	T <sub>STG</sub>	-55 to +150							°C	
Typical junction capacitance f=1MHz and applied 4V DC reverse voltage	C <sub>J</sub>	6							pF	

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

Company reserves the right to improve product design, functions and reliability without notice.

REV:A

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

Fig.1 - Typical Current Derating Curve

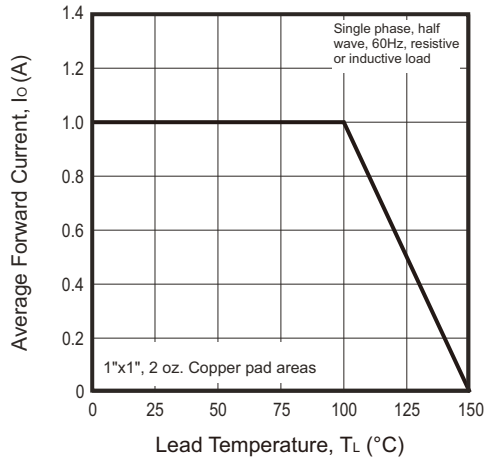


Fig.2 - Typical Forward Characteristics

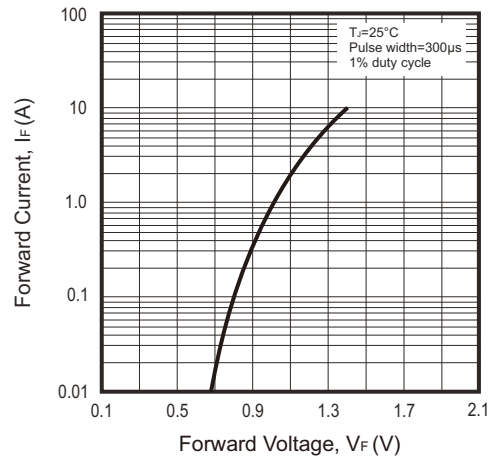


Fig.3 - Non-repetitive Forward Surge Current

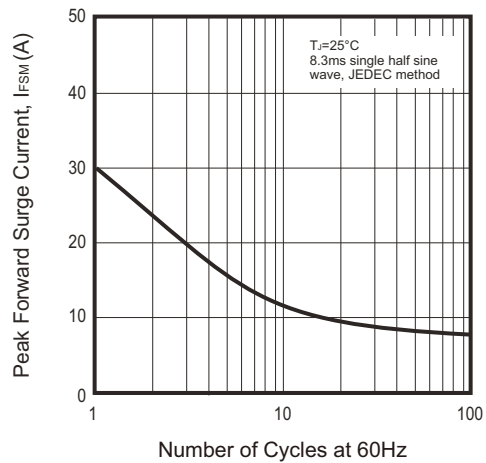


Fig.4 - Typical Reverse Characteristics

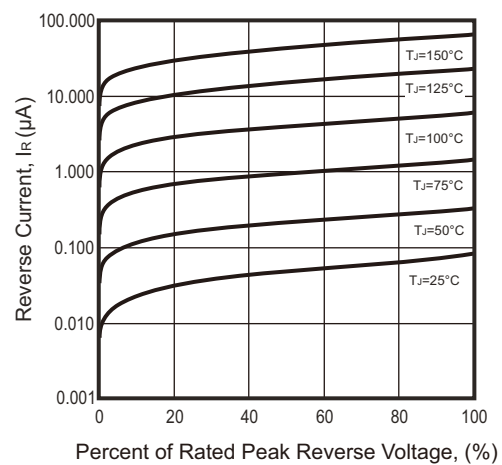
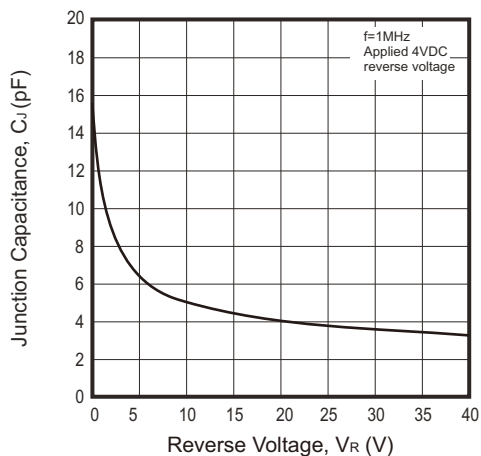


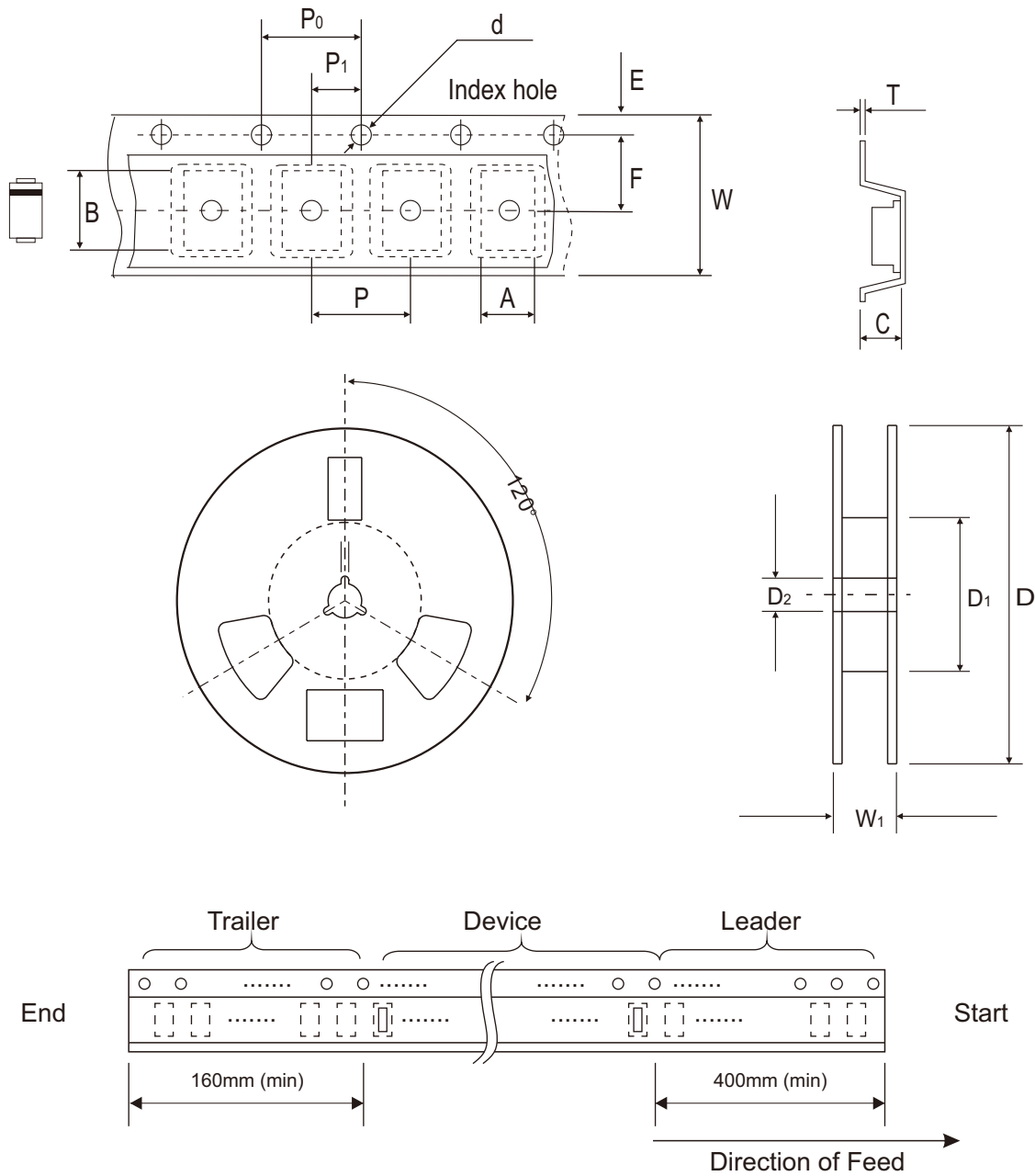
Fig.5 - Typical Junction Capacitance



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## Reel Taping Specification



TS/SOD-123FL	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.95 ± 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)	0.077 ± 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

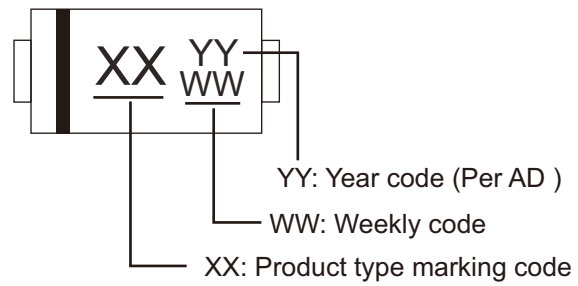
TS/SOD-123FL	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.05	8.00 ± 0.30	12.00 + 0.50 - 0
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 ± 0.012	0.472 + 0.020 - 0

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REV:A

## 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)

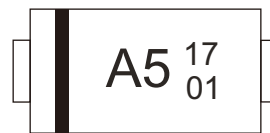
## Product code printed

For example as follows:

P/N: CGRTS4005-HF

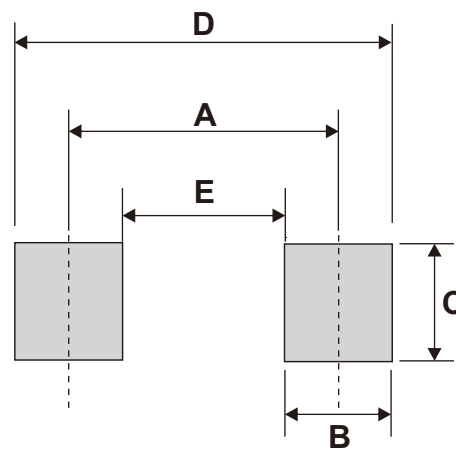
Manufacture date\_ Year: 2017 / Weekly:01

Product code printed:



## Suggested 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

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Comchip Technology:

[CGRTS4002-HF](#) [CGRTS4003-HF](#) [CGRTS4001-HF](#) [CGRTS4006-HF](#) [CGRTS4004-HF](#) [CGRTS4005-HF](#)  
[CGRTS4007-HF](#)