

Voltage : 75V

Current: 0.15 Ampere

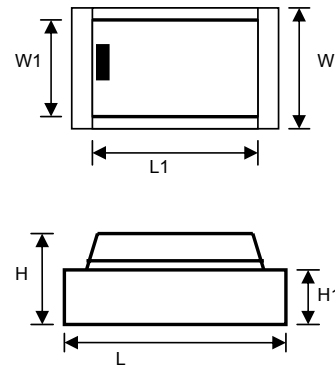
Part No: **HSD4148 SOD-123**



APPLICATION Ultra high speed switching
FEATURE Small surface mounting type (SOD-123) High speed. (TRR=4.0nSec Type) Suitable for high packing density. Maximum total power dissipation is 300mW. Peak forward current is 500mA. Withstand 275°C soldering temperature. ESD rating of class 3(>10KV)per human body model.
CONSTRUCTION Silicon epitaxial planar
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

DIMENSION (mm)
HSD4148 SOD-123

W:	1.60mm
W1	1.25mm
L1	2.85mm
H	0.93mm
H1	0.55mm
L	3.60mm



CIRCUIT



MAXIMUM RATING (At Ta = 25°C unless otherwise noted)

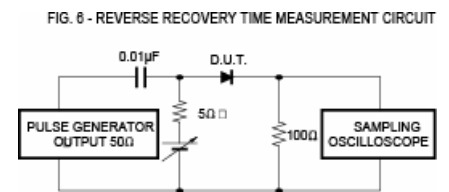
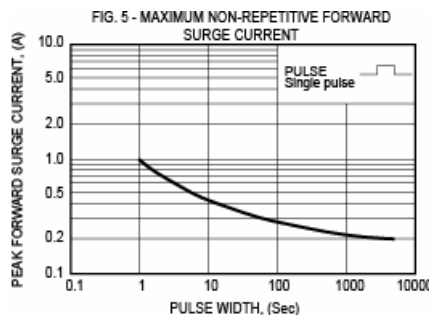
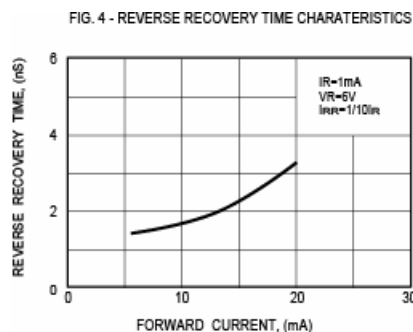
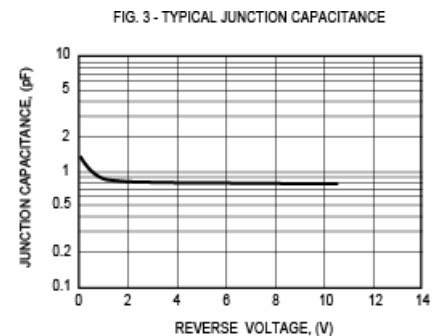
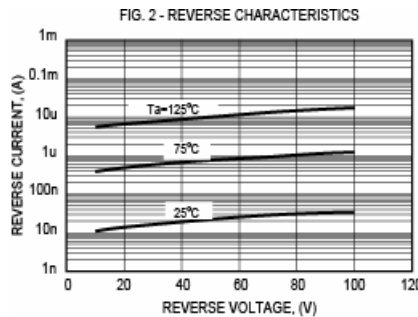
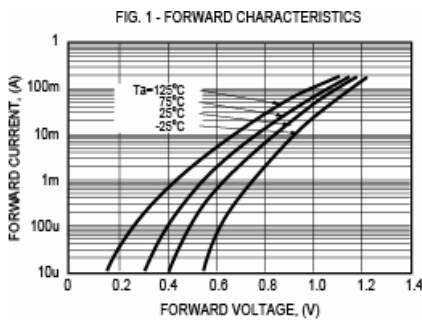
RATING	SYMBOL	HSD4148 SOD-123	UNITS	
Maximum Non-Repetitive Peak Reverse Voltage	V _{RM}	100	Volts	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	75	Volts	
Maximum working Peak Reverse Voltage	V _{RWM}			
Maximum DC Blocking Voltage	V _{DC}			
Maximum RMS Voltage	V _{RMS}	53	Volts	
Maximum Average Forward Rectified Current	I _o	0.15	Amps	
Peak Forward Surge Current	I _{FSM}	@1Sec	1.0	Amps
		@1,0uSec	2.0	
Typical Junction Capacitance between terminal (Note 1)	C _J	3.0	pF	
Maximum Reverse Recovery (Note 2)	T _{RR}	4.0	nSec	
Maximum Thermal Resistance	R _{θ JA}	350	°C/W	
Maximum operating and storage temperature range.	T _J , T _{STG}	-65+150	°C	

ELECTRICAL CHARACTERISTICS (At Ta = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HSD4148 SOD-123	UNITS	
Maximum Instantaneous Forward Voltage at = 1-mA	V _F	I _F =100mA	1.0	Volts
Maximum Average Reverse Current	I _R	VR= 20V @TJ=25°C	25 nAmps	uAmps
		VR= 75V @TJ=25°C	5.0	
		VR= 20V @TJ=150°C	30	
		VR= 70V @TJ=150°C	50	

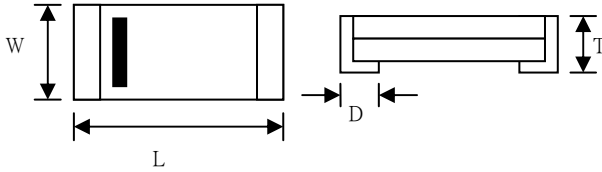
- NOTES 1 Measured at 1.0 MHz and allied reverse voltage of 0 voltage
 2 Measured at applied forward current of 10mA, reverse current of 1.0 mA, Reverse voltage of 6.0 voltage and RL = 100 ohms.
 3 ESD sensitive product handling required.

RATING CHARACTERISTICS CURVES



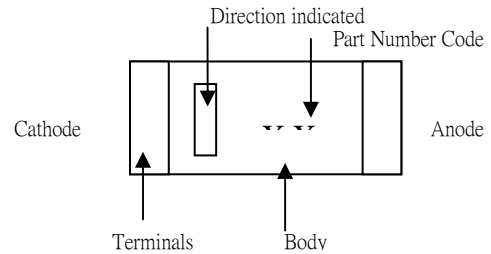
OUTLINE DIMENSION

Item	0603	0805	1206	SOD-123
L	1.55±0.1 (0.062±0.004)	2.00±0.20 (0.080±0.008)	3.2±0.20 (0.127±0.008)	3.50±0.10 (0.140±0.002)
W	0.8±0.10 (0.032±0.004)	1.25±0.20 (0.062±0.004)	1.50±0.20 (0.059±0.008)	1.50±0.10 (0.059±0.004)
T	0.065±0.10 (0.026±0.004)	0.85±0.10 (0.034±0.004)	0.85±0.10 (0.034±0.004)	0.92±0.10 (0.036±0.004)
D	0.35±0.10 (0.014±0.004)	0.45±0.20 (0.018±0.008)	0.55±0.20 (0.022±0.008)	0.35±0.10 (0.0137±0.004)



DEVICE MARKING

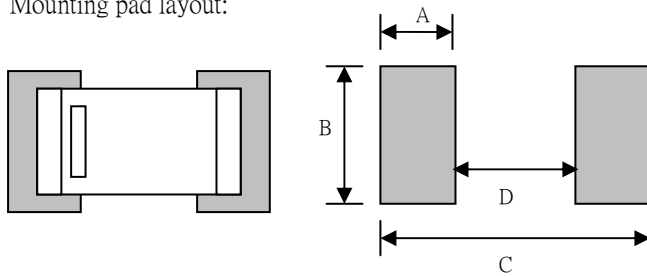
Device has been marked indelibly and legibly as follow



MOUNTING PAD

Unit : mm

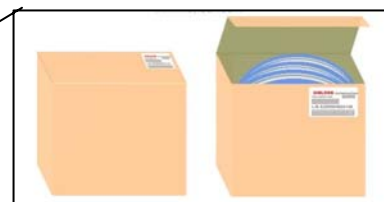
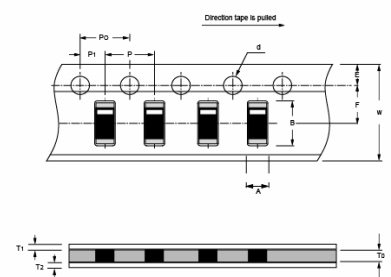
Mounting pad layout:



Layout	A	B	C	D
Size: 0805	1.2	1.2	3.3	0.9
Micro Melf	0.9	1.4	2.8	1.0
SOD-323	1.35	0.65	3.75	1.05
1206	1.2	1.7	4.1	1.7
Mini Melf	1.35	1.7	4.8	2.1
SOD-123	1.2	0.7	4.9	2.5

REEL TAPING SPECIFICATIONS

Item	Symbol	Specifications (mm)			
		Size: 0603	Size: 0805	Size: 1206	SOD-123
Carrier width	A	1.10±0.05	1.65±0.10	2.0±0.10	2.0±0.10
Carrier length	B	1.90±0.05	2.40±0.10	3.6±0.10	3.8±0.10
Sprocket hole	d	1.50±0.15	1.50±0.15	1.50±0.05	1.50±0.05
Sprocket hole position	E	1.75±0.10	1.75±0.10	1.75±0.1	1.75±0.1
Punch hole position	F	3.50±0.05	3.50±0.05	3.5±0.05	3.5±0.05
Punch hole pitch	P	4.00±0.10	4.00±0.10	4.0±0.10	4.0±0.10
Sprocket hole pitch	Po	4.00±0.10	4.00±0.10	4.0±0.10	4.0±0.10
Embossment centre	P1	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05
Base tape width	W	8.0±0.20	8.0±0.20	8.0±0.20	8.0±0.20
Top/Bottom seat tape width	W1	5.25±0.05	5.25±0.05	5.25±0.05	5.25±0.05
Base tape thickness	T0	0.95±0.02	0.95±0.02	0.95±0.02	1.05±0.02
Top seat tape thickness	T1	0.054±0.005	0.054±0.005	0.054±0.005	0.054±0.005
Bottom seat tape thickness	T2	0.042±0.005	0.042±0.005	0.042±0.005	0.042±0.005



Small Signal - Chip Switching Diode

Part No.	Peak Repetitive Reverse Voltage VRRM (V)	Max. Average Rectified Current Io (mA)	Peak Forward Surge Current IFSM (A)	Forward Voltage Drop VF (A)	Max Reverse Current IR (uA)	Power Rating (mW)	Reverse Recovery TRR (nSec)	Capacitance Ctot (pF)
1 CD4148WTP (0603)	75	150	0.2	1.0	5.0	300	4.0	4.0
2 CD4148WSP (0805)	75	150	0.2	1.0	5.0	300	4.0	4.0
3 CD4148WP (1206)	75	150	0.2	1.0	5.0	300	4.0	4.0
4 CD4151WP (1206)	50	150	0.2	1.0	5.0	500	4.0	2.0
5 CD4448WP (1206)	75	150	0.2	1.0	5.0	300	4.0	4.0
6 HSD4148 SOD-123	75	150	0.2	1.0	5.0	300	4.0	3.0
7 HSD4151 SOD-123	50	150	0.2	1.0	50 nAmps	500	4.0	2.0
8 HSD4448 SOD-123	75	150	0.2	1.0	5.0	300	4.0	3.0
9 BASM16 SOD-123	100	150	0.2	1.0	1.0 (VR=75V)	350	4.0	1.5
10 MAVM70 SOD-123	75	150	0.2	1.0	2.5 (VR=75V)	300	4.0	1.5