

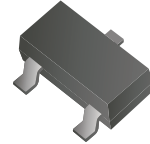
## CDSH3-56-HF/70-HF/99-HF

Reverse Voltage: 85 Volts

Forward Current: 75 mA

RoHS Device

Halogen Free



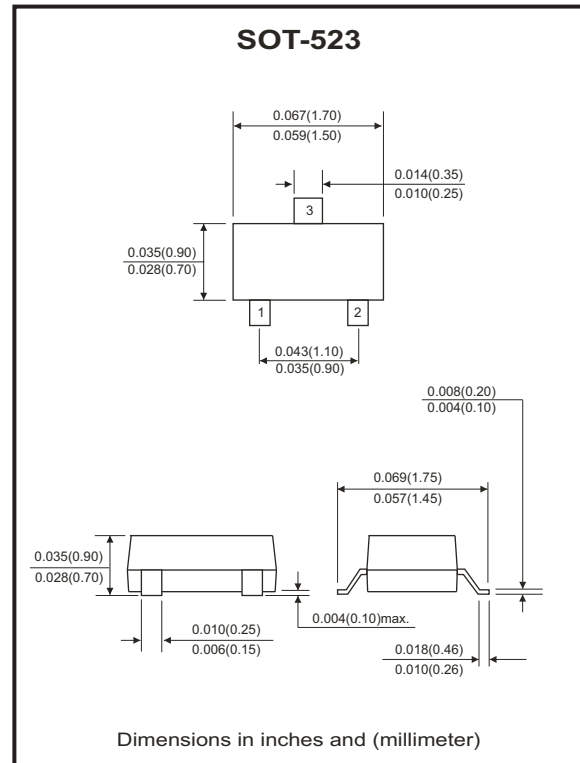
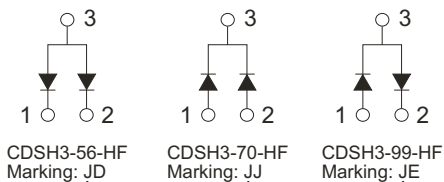
### Features

- Design for mounting on small surface.
- Fast switching speed.
- High mounting capability, strong surge withstand, high reliability.

### Mechanical data

- Case: SOT-523, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Weight: 0.002 grams(Approx.).

### Circuit diagram



### Maximum Rating (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	85	V
Forward current	I <sub>F</sub>	75	mA
Non-Repetitive peak forward surge current @ t=8.3 ms	I <sub>FSM</sub>	2	A
Power dissipation	P <sub>d</sub>	150	mW
Thermal resistance from junction to ambient	R <sub>θJA</sub>	833	°C/W
Junction temperature range	T <sub>j</sub>	-40~+150	°C
Storage temperature range	T <sub>STG</sub>	-55~+150	°C

## Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 1\mu A$	$V_{(BR)}$	85			V
Reverse current	$V_R = 75V$	$I_{R1}$			2	$\mu A$
	$V_R = 25V$	$I_{R2}$			0.03	$\mu A$
Forward voltage (note 1)	$I_F = 1mA$	$V_{F1}$			715	mV
	$I_F = 10mA$	$V_{F2}$			855	
	$I_F = 50mA$	$V_{F3}$			1000	
	$I_F = 150mA$	$V_{F4}$			1250	
Capacitance between terminals	$V_R=0V, f = 1MHz$	$C_J$			1.5	pF
Reverse recovery time	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	$T_{RR}$			4	nS

Notes: Pulse test width  $p_w=300\mu$  sec, 1% duty cycle

## RATING AND CHARACTERISTIC CURVES (CDSH3-56-HF/70-HF/99-HF)

Fig.1 - Forward Characteristics

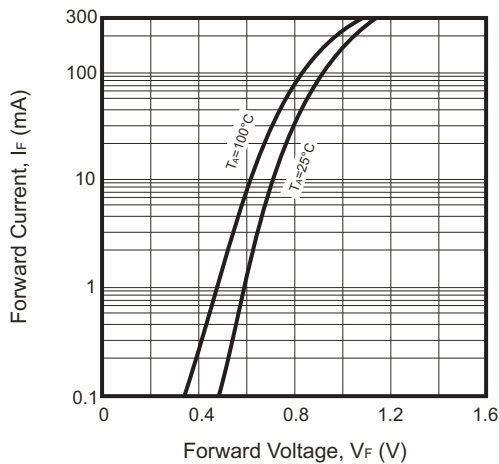


Fig.2 - Reverse Characteristics

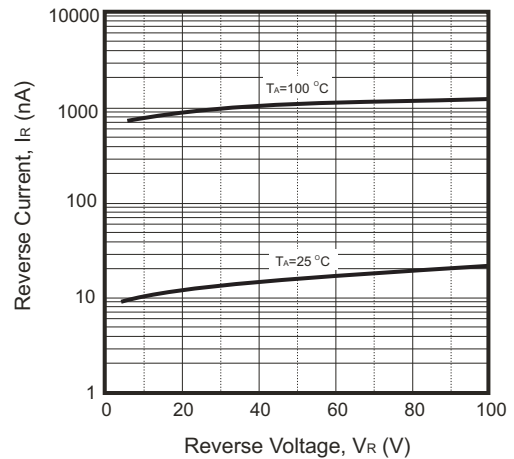


Fig.3 - Capacitance Characteristics

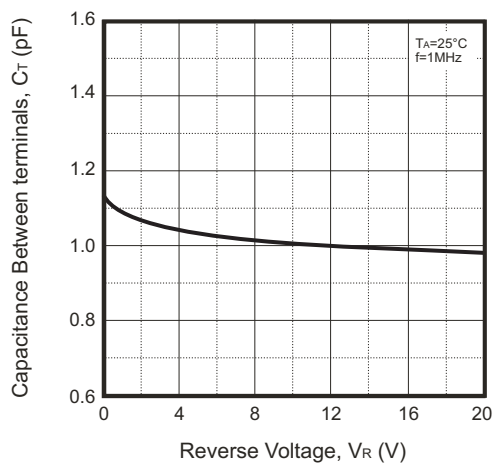
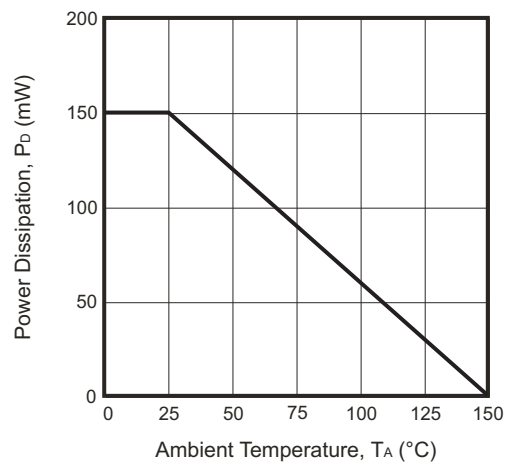
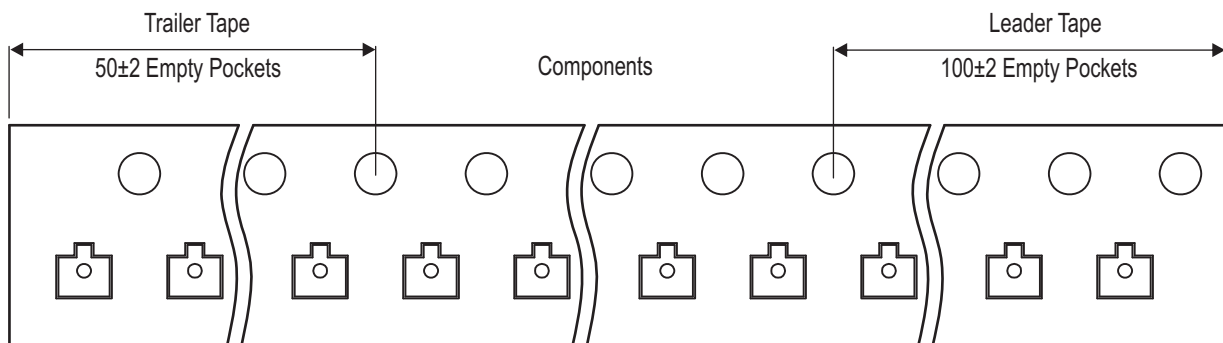
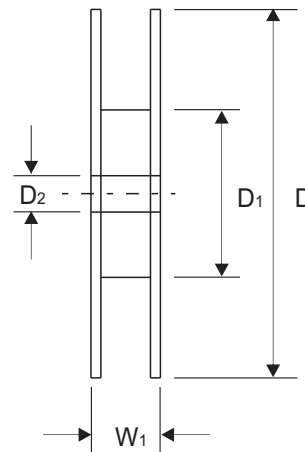
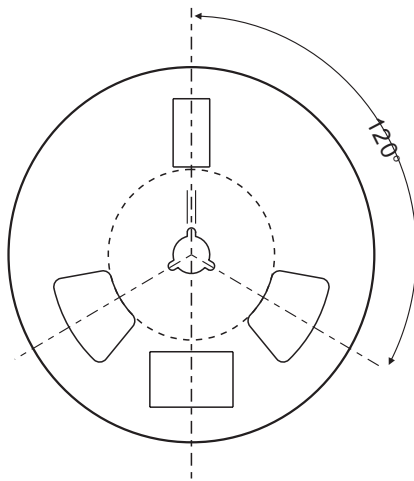
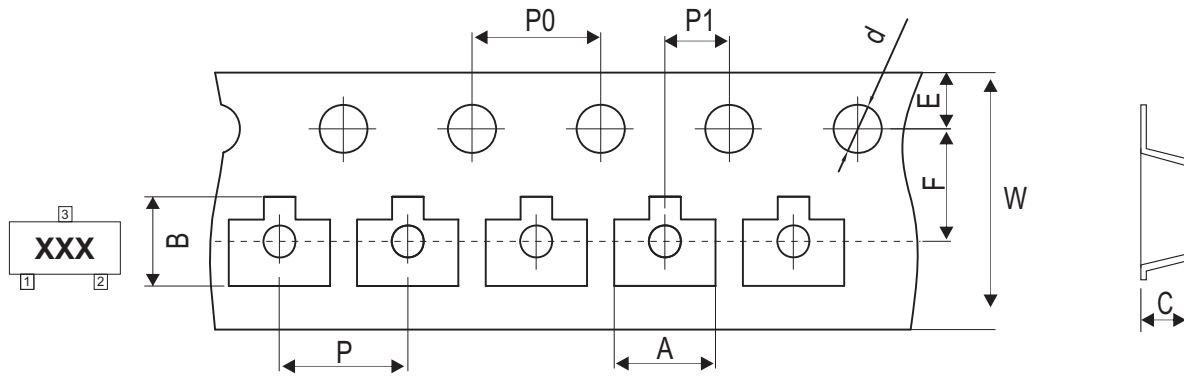


Fig.4 - Power Derating Curve



## Reel Taping Specification



SOT-523	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.05	1.85 ± 0.05	0.88 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.073 ± 0.002	0.073 ± 0.002	0.035 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

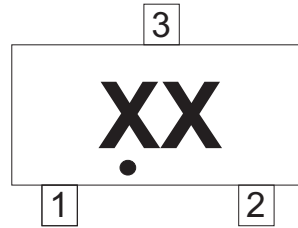
SOT-523	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.484 ± 0.039

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

REV:A

## Marking Code

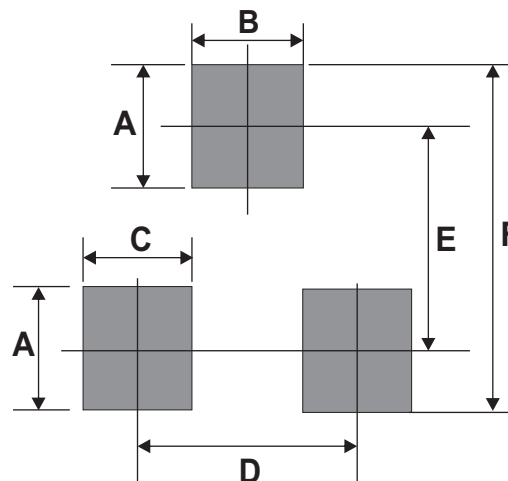
Part Number	Marking Code
CDSH3-56-HF	JD
CDSH3-70-HF	JJ
CDSH3-99-HF	JE



xx = Product type marking code  
 Solid dot = Halogen free parts

## Suggested PAD Layout

SIZE	SOT-523	
	(mm)	(inch)
A	0.60	0.024
B	0.50	0.020
C	0.40	0.016
D	1.00	0.039
E	1.24	0.049
F	1.84	0.072



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
SOT-523	3,000	7