



**THE DATASHEET OF
CDSH3-99-G**

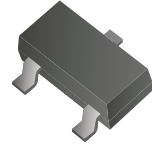


CDSH3-56-G/70-G/99-G

Reverse Voltage: 85 Volts

Forward Current: 75 mA

RoHS Device



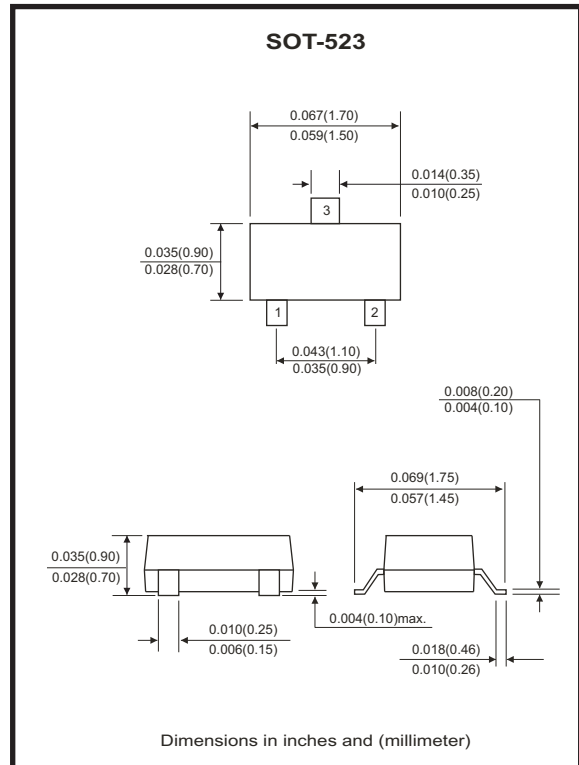
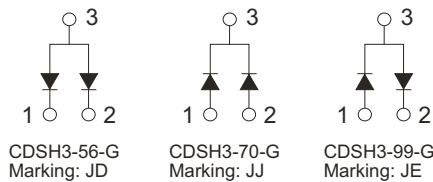
Features

- 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 _R	85	V
Forward current	I _F	75	mA
Non-Repetitive peak forward surge current @ t=8.3 ms	I _{FSM}	2	A
Power dissipation	P _d	150	mW
Thermal resistance from junction to ambient	R _{θJA}	833	°C/W
Junction temperature range	T _j	-40~+150	°C
Storage temperature range	T _{STG}	-55~+150	°C

Electrical Characteristics (at $T_a=25^\circ\text{C}$ unless otherwise noted)

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

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

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

Fig.1 - Forward Characteristics

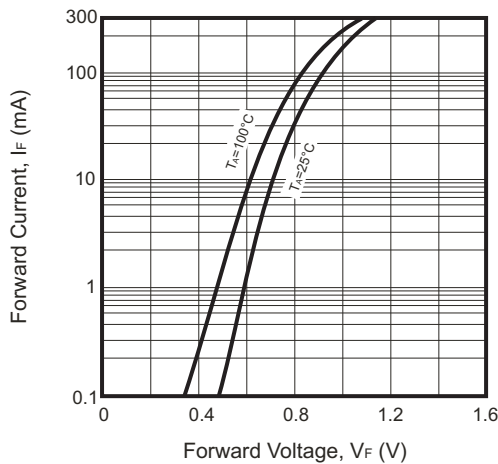


Fig.2 - Reverse Characteristics

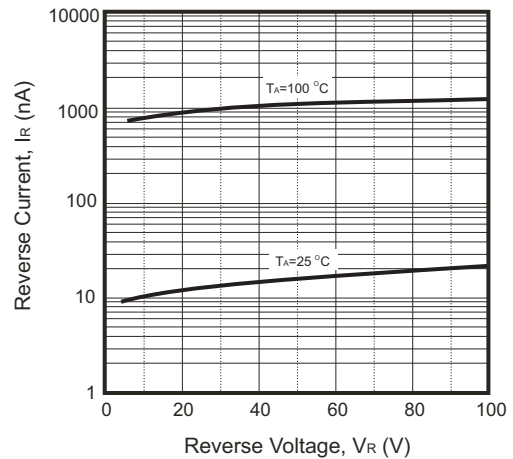


Fig.3 - Capacitance Characteristics

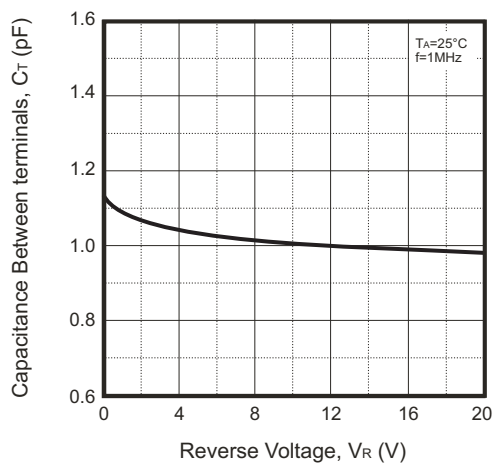
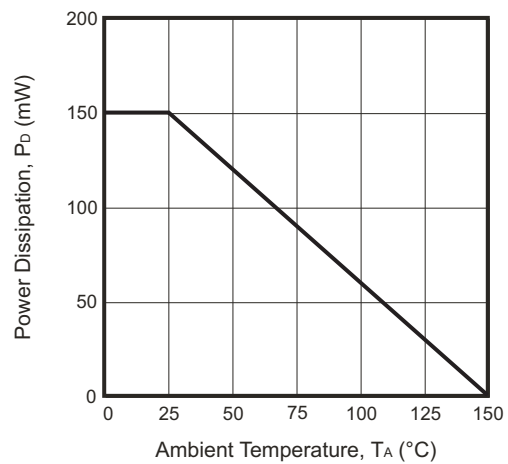
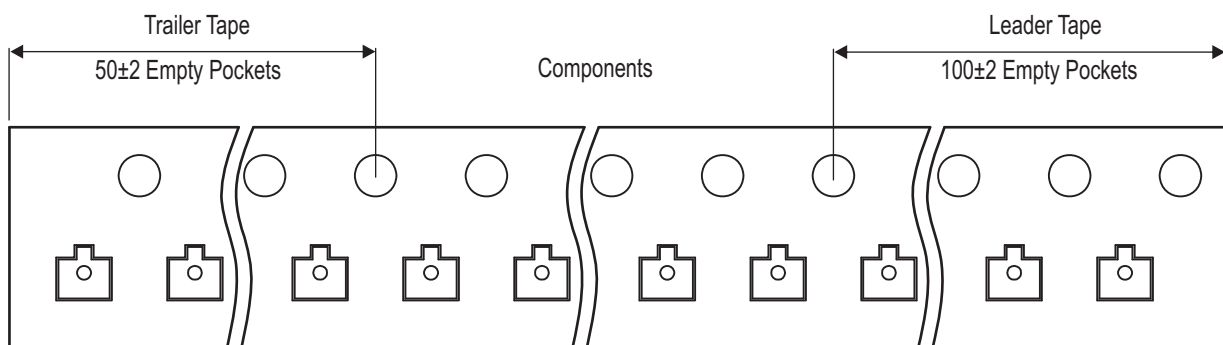
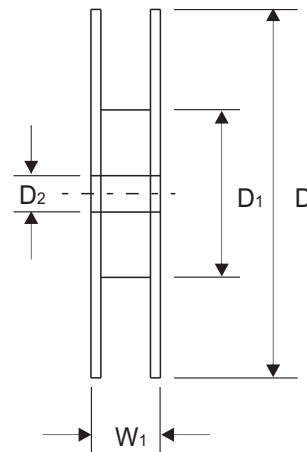
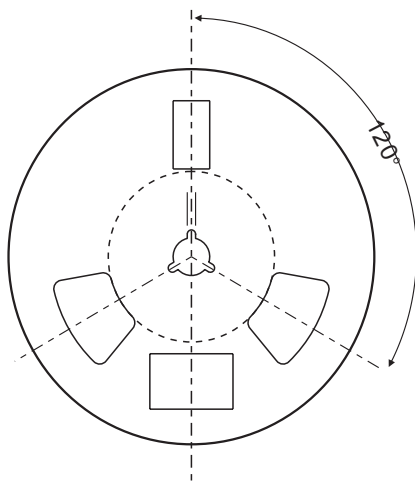
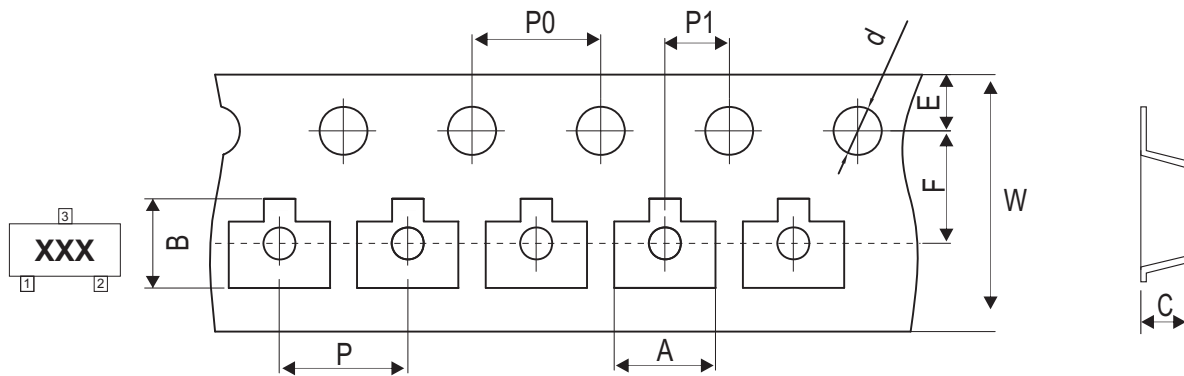


Fig.4 - Power Derating Curve



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

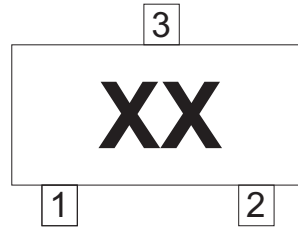
SOT-523	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.484 ± 0.039

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

REV:B

Marking Code

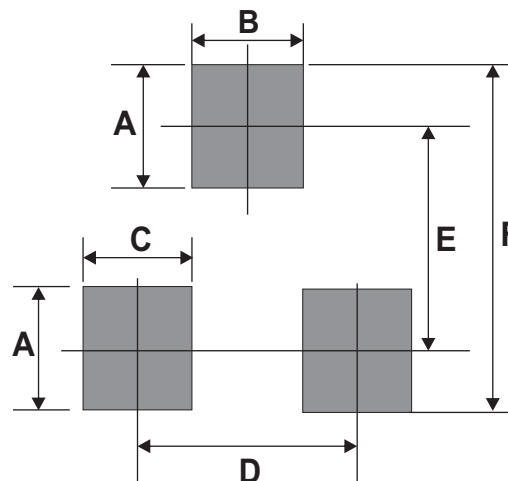
Part Number	Marking Code
CDSH3-56-G	JD
CDSH3-70-G	JJ
CDSH3-99-G	JE



xx = Product type marking code

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

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