

### ■ Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSD10100CTG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### ■ Mechanical data

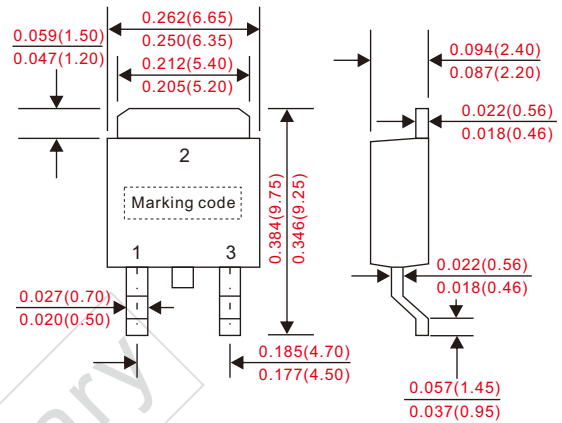
- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, DPAK / TO-252.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.34 gram.

### ■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

### ■ Outline

DPAK(TO-252)



Dimensions in inches and (millimeters)

Parameter	Conditions	Symbol	CSD10100CT-A	UNIT
Marking code			CSD10100CT	
Peak repetitive reverse voltage		$V_{RRM}$		
Working peak reverse voltage		$V_{RWM}$	100	V
DC blocking voltage		$V_{RM}$		
RMS reverse voltage		$V_{R(RMS)}$	71	V
Forward rectified current		$I_O$	10	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	110	A
Thermal resistance(1)	Junction to case	$R_{BJC}$	22	°C/W
Operating and Storage temperature		$T_J, T_{STG}$	-65 ~ +175	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	$I_F = 5A, T_J = 25^\circ C$	$V_F$		770	840	mV
	$I_F = 5A, T_J = 125^\circ C$			630	710	
Reverse current	$V_R = V_{RRM}, T_J = 25^\circ C$	$I_R$		0.015	0.2	mA
	$V_R = V_{RRM}, T_J = 125^\circ C$				25	

Note : 1. Thermal resistance from junction to case per leg, with heatsink size (1.35" x 0.95" x 0.18") Al-plate.  
 2. Device mounted on FR-4 substrate PC board, 1oz copper with minimum recommended pad layout.  
 3. Device mounted on Polyimide substrate, 1\*MRP, 2oz, copper, PC boards.

Rating and characteristic curves

Fig. 1 - Forward Power Dissipation

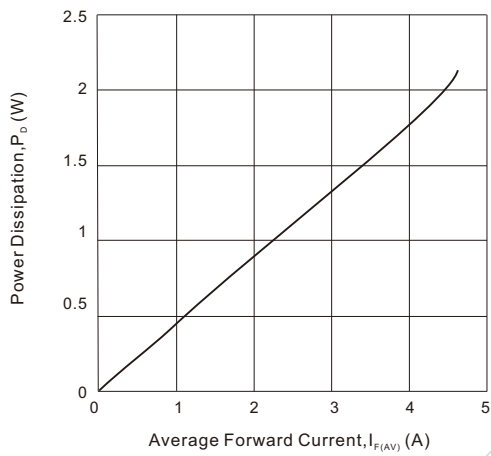


Fig. 2 - Instantaneous Forward Characteristics

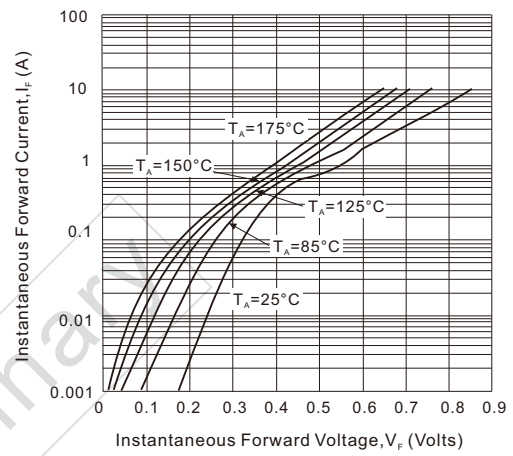


Fig. 3 - Reverse Characteristics

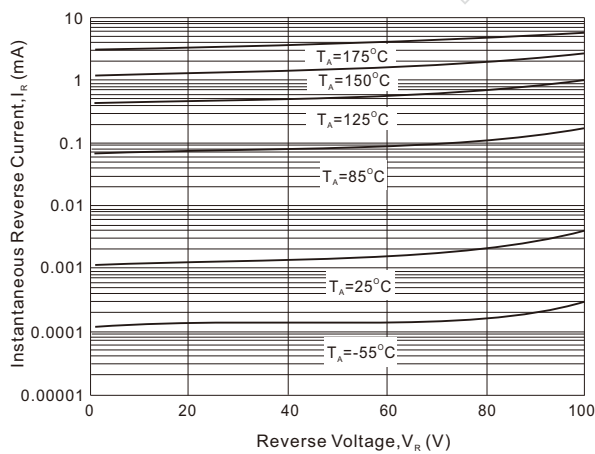
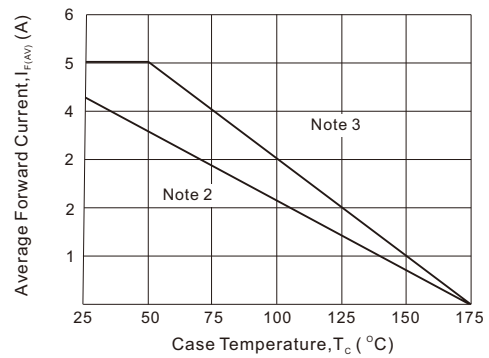
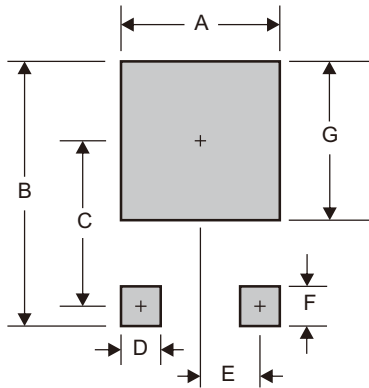


Fig.4 - Forward Current Derating Curve



■ DPAK(TO-252) foot print



A	B	C	D	E	F	G
0.276 (7.00)	0.457 (11.60)	0.272 (6.90)	0.059 (1.50)	0.091 (2.30)	0.098 (2.50)	0.276 (7.00)

Dimensions in inches and (millimeters)

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