

■ Features

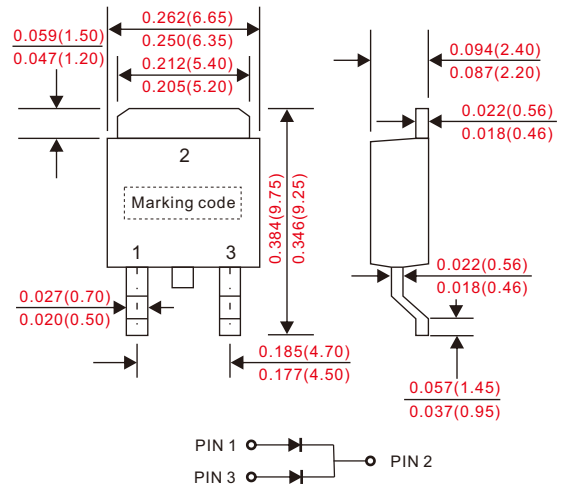
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSD2040CTG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ 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.

■ Outline

DPAK(TO-252)



Dimensions in inches and (millimeters)

■ 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%.

Parameter	Conditions	Symbol	CSD2040CT	CSD2045CT	UNIT
Marking code			CSD2040CT	CSD2045CT	
Peak repetitive reverse voltage		V_{RRM}			
Working peak reverse voltage		V_{RWM}	40	45	V
DC blocking voltage		V_{RM}			
Forward rectified current	$T_c = 110^\circ\text{C}$	I_O	20		A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	120		A
Peak repetitive reverse surge current	2us - 1kHz	I_{RRM}	2		A
Thermal resistance(1)	Junction to case	R_{BJC}	2		°C/W
Operating and Storage temperature		T_J, T_{STG}	-65 ~ +150		°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$	V_F			540	mV
	$I_F = 10\text{A}, T_J = 125^\circ\text{C}$			430	490	
Reverse current	$V_R = V_{RRM}, T_J = 25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM}, T_J = 125^\circ\text{C}$				100	

Note : 1. Thermal resistance from junction to case per leg, with heatsink size(1.35" x 0.95" x 0.18") Al-plate.

■ Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve

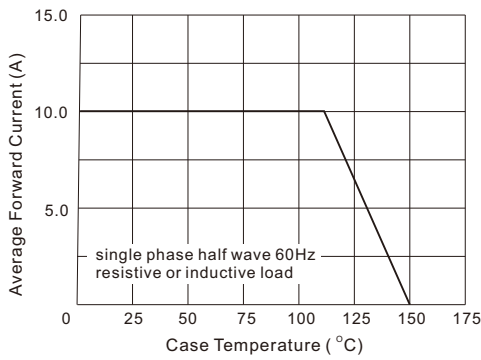


Fig. 2 - Instantaneous Forward Characteristics (per diode)

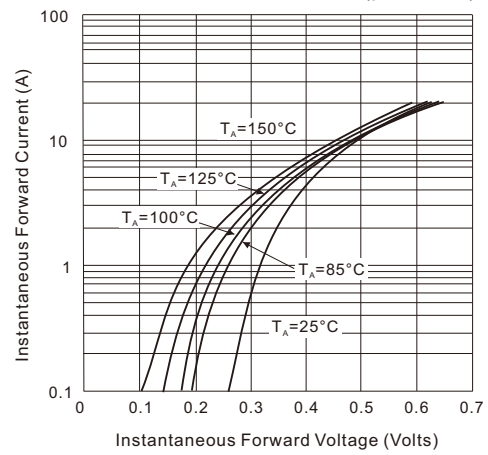
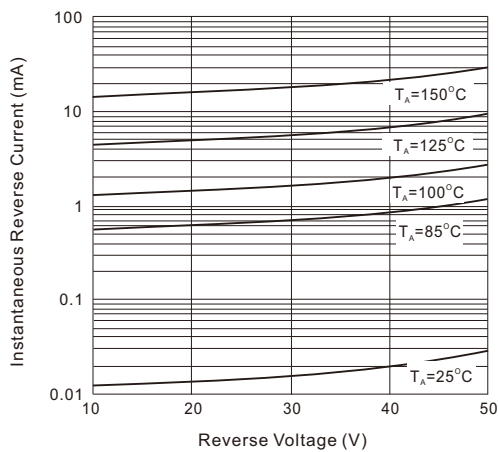
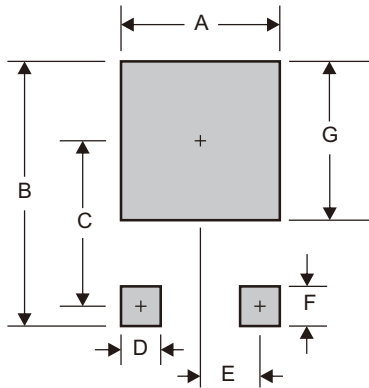


Fig. 3 - Reverse Characteristics (per diode)



■ 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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