



Solid State Devices, Inc.

14701 Firestone Blvd. * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED40HE 300 CT

- L Screening ^{2/}**
 — = None
 TX = TX Level
 TXV = TXV Level
 S = S Level
- L Lead Orientation**
 1 = Front Mount
 2 = Side Mount
 3 = Split Mount

SED40HE300CT Series

SURFACE MOUNT 40 AMP, 300 VOLTS CENTERTAP SCHOTTKY RECTIFIER

FEATURES:

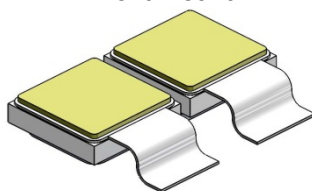
- Low Reverse Leakage
- Low Forward Voltage Drop
- Hermetically Sealed Power Surface Mount Package
- Guard Ring for Overvoltage Protection
- Eutectic Die Attach
- 175°C Operating Temperature
- Hot Case Version (Isolated Versions Available – Contact Factory)
- Smaller Footprint than TO-25X package
- Weight: 0.65 g typ
- TX, TXV, and Space Level Screening Available ^{2/}

MAXIMUM RATINGS (per leg)	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	V_{RRM} V_{RWM} V_R	300	Volts
Average Rectified Forward Current Resistive Load, 60 Hz, Sine Wave, $T_A = 100^\circ\text{C}$	I_O	20	Amps
Peak Surge Current 8.3 ms Pulse, Half Sine Wave, 1 pulse, $T_A = 25^\circ\text{C}$	I_{FSM}	250	Amps
Operating and Storage Temperature	T_{OP} & T_{stg}	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	1.25	$^\circ\text{C/W}$

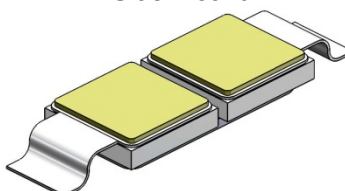
Notes:

^{1/} For ordering information, price, operating curves, and availability – Contact factory.
^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

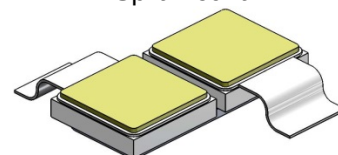
SED40HE300CT1
Front Mount



SED40HE300CT2
Side Mount



SED40HE300CT3
Split Mount



NOTE: All specifications are subject to change without notification.
 SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: SH0099B

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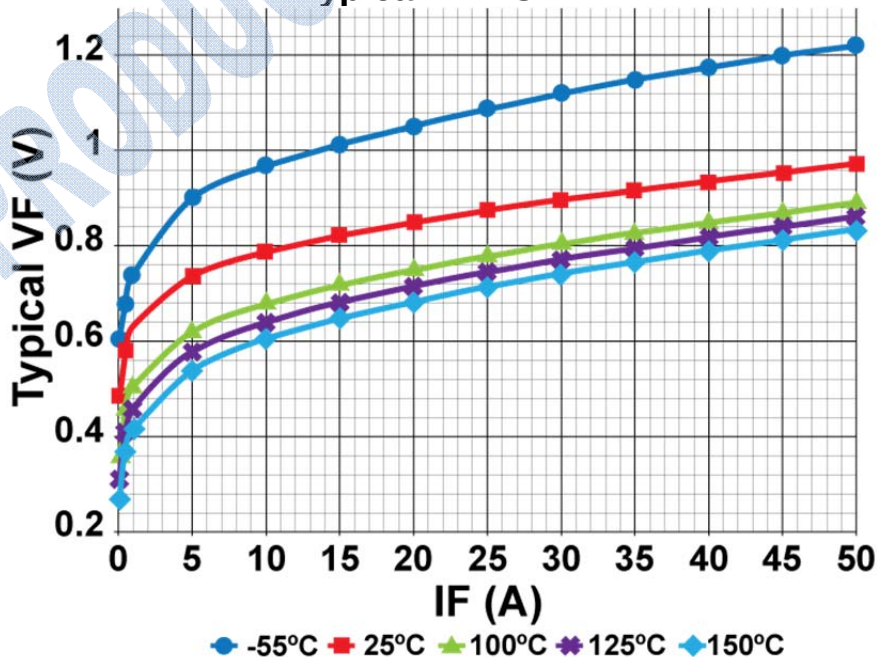
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ELECTRICAL CHARACTERISTICS (per leg)		Symbol	Typical	Maximum	Unit
Instantaneous Forward Voltage Drop ($I_F = 1 A_{DC}$, 300 - 500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F1}	0.74	-	V_{DC}
	$T_A = 25^\circ C$	V_{F2}	0.63	0.70	
	$T_A = 125^\circ C$	V_{F3}	0.46	0.55	
Instantaneous Forward Voltage Drop ($I_F = 5 A_{DC}$, 300 - 500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F4}	0.90	-	V_{DC}
	$T_A = 25^\circ C$	V_{F5}	0.74	0.80	
	$T_A = 125^\circ C$	V_{F6}	0.58	0.65	
Instantaneous Forward Voltage Drop ($I_F = 10 A_{DC}$, 300 - 500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F7}	0.97	-	V_{DC}
	$T_A = 25^\circ C$	V_{F8}	0.79	0.85	
	$T_A = 125^\circ C$	V_{F9}	0.64	0.72	
Instantaneous Forward Voltage Drop ($I_F = 20 A_{DC}$, 300 - 500 μ sec Pulse)	$T_A = -55^\circ C$	V_{F10}	1.06	-	V_{DC}
	$T_A = 25^\circ C$	V_{F11}	0.85	0.92	
	$T_A = 125^\circ C$	V_{F12}	0.72	0.80	
Reverse Leakage Current (Rated V_R , 300 μ sec pulse minimum)	$T_A = 25^\circ C$	I_{R1}	5	50	μA
	$T_A = 100^\circ C$	I_{R2}	200	-	μA
	$T_A = 125^\circ C$	I_{R3}	0.6	5	mA
Junction Capacitance ($T_A = 25^\circ C$, $f = 1$ MHz)	$V_R = 5V$	C_{J1}	250	350	pF
	$V_R = 10V$	C_{J2}	185	-	pF

SED40HE300CT (per leg)
Typical VF vs. IF



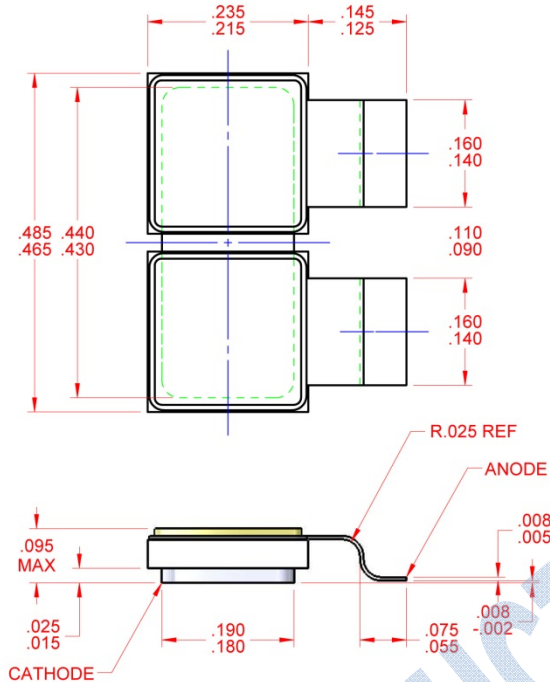


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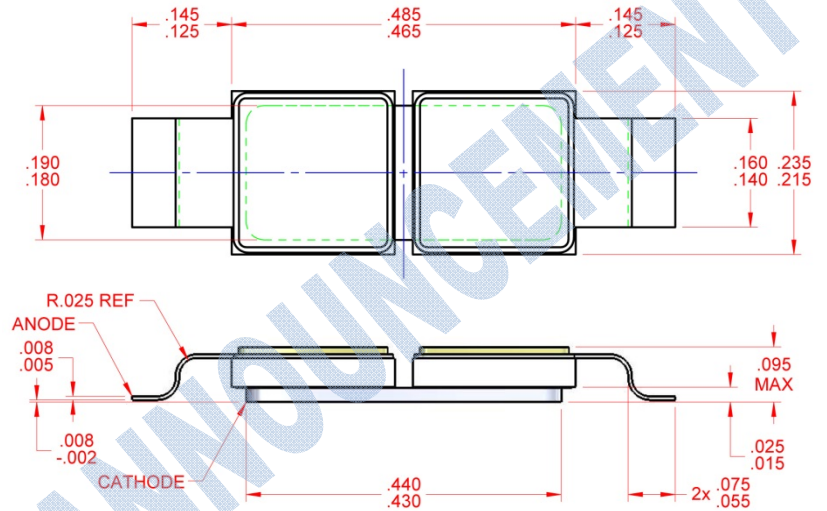
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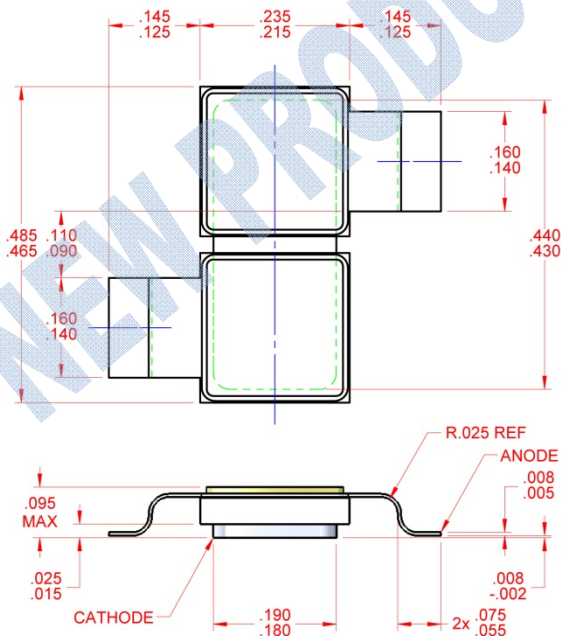
CASE OUTLINE: SED40HE300CT1



CASE OUTLINE: SED40HE300CT2



CASE OUTLINE: SED40HE300CT3



Configuration	Base	Leads
Common Cathode (CT)	Cathode	Anode

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