



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638-5223

Phone: (562) 404-4474 * Fax: (562) 404-1773

ssdi@ssdi-power.com * www.ssdi-power.com

SED40HE100CT thru SED40HE150CT Series

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SED40HE100CT
SED40HE150CT

Screening ^{2/}
 ___ = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Lead Orientation
 1 = Front Mount
 2 = Side Mount
 3 = Split Mount

**SURFACE MOUNT
40 AMP, 100 - 150 VOLTS
CENTERTAP LOW LEAKAGE
SCHOTTKY RECTIFIER**

FEATURES:

- Very Low Reverse Leakage
- Low Forward Voltage Drop
- Hermetically Sealed Power Surface Mount Package
- Guard Ring for Overvoltage Protection
- 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/}

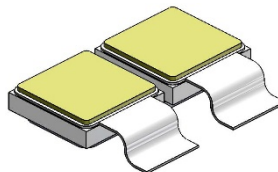
MAXIMUM RATINGS (per leg) ^{3/}

Peak Repetitive and Peak Reverse Voltage SED40HE100 SED40HE150	V_{RRM} V_R	100 150	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T _C = 100°C)	I_O	20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I _O , allow junction to reach equilibrium between pulses, T _A = 25°C)	I_{FSM}	175	Amps
Operating & Storage Temperature	T_{OP} & T_{stg}	-55 to +175	°C
Maximum Thermal Resistance (Junction to Case)	R_{θJC}	1.25	°C/W

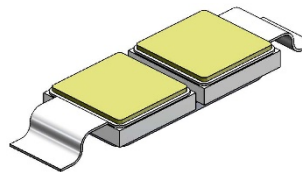
NOTES:

- ^{1/} For ordering information, price, operating curves, and availability - contact factory.
- ^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.
- ^{3/} Unless otherwise specified, all electrical characteristics @25°C.

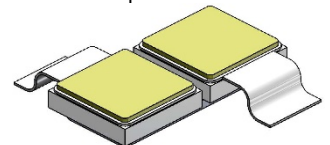
**SED40HE100CT1
SED40HE150CT1**
Front Mount



**SED40HE100CT1
SED40HE150CT1**
Side Mount



**SED40HE100CT1
SED40HE150CT1**
Split Mount



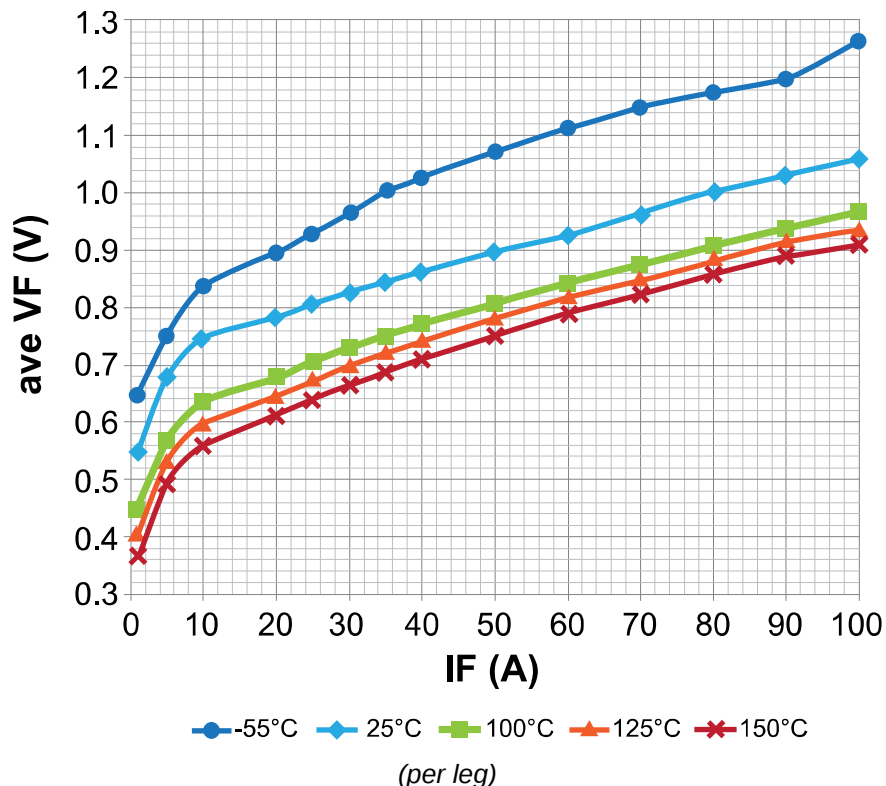
NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

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SED40HE100CT thru SED40HE150CT Series

ELECTRICAL CHARACTERISTICS (per leg) ^{3/}		Symbol	Typical	Maximum	Units
Instantaneous Forward Voltage Drop ($I_F = 1 A_{DC}$, 300 - 500 μ sec pulse)	$T_A = -55^\circ C$	V_{F1}	0.65	-	V_{DC}
	$T_A = 25^\circ C$	V_{F2}	0.55	0.60	
	$T_A = 125^\circ C$	V_{F3}	0.41	0.46	
Instantaneous Forward Voltage Drop ($I_F = 5 A_{DC}$, 300 - 500 μ sec pulse)	$T_A = -55^\circ C$	V_{F4}	0.76	-	V_{DC}
	$T_A = 25^\circ C$	V_{F5}	0.68	0.75	
	$T_A = 125^\circ C$	V_{F6}	0.53	0.60	
Instantaneous Forward Voltage Drop ($I_F = 10 A_{DC}$, 300 - 500 μ sec pulse)	$T_A = -55^\circ C$	V_{F7}	0.85	-	V_{DC}
	$T_A = 25^\circ C$	V_{F8}	0.75	0.82	
	$T_A = 125^\circ C$	V_{F9}	0.60	0.67	
Instantaneous Forward Voltage Drop ($I_F = 20 A_{DC}$, 300 - 500 μ sec pulse)	$T_A = -55^\circ C$	V_{F10}	0.91	-	V_{DC}
	$T_A = 25^\circ C$	V_{F11}	0.79	0.87	
	$T_A = 125^\circ C$	V_{F12}	0.65	0.73	
Reverse Leakage Current ($T_A = 25^\circ C$, 300 μ sec pulse minimum)	$V_R = 100 V$	I_{R1}	0.2	5	μA
	$V_R = 150 V$		5.0	50	
Reverse Leakage Current ($T_A = +125^\circ C$, 300 μ sec pulse minimum)	$V_R = 100 V$	I_{R2}	150	750	μA
	$V_R = 150 V$		500	2500	
Reverse Leakage Current ($T_A = +150^\circ C$, 300 μ sec pulse minimum)	$V_R = 100 V$	I_{R3}	0.75	-	mA
	$V_R = 150 V$		2.50	-	
Junction Capacitance ($f = 1 MHz$, $T_A = 25^\circ C$)	$V_R = 5 V$	C_J	460	-	pF
	$V_R = 10 V$		335	400	



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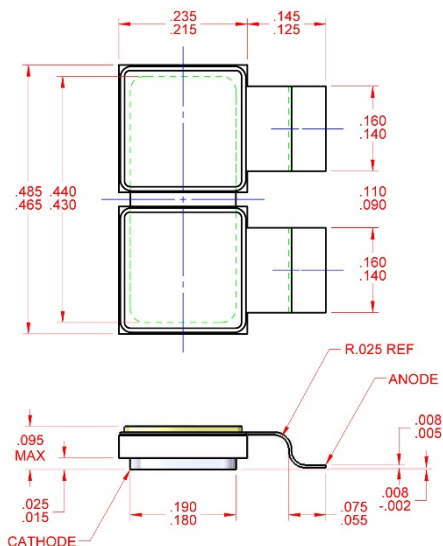
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Package Outline:

SED40HE100CT1

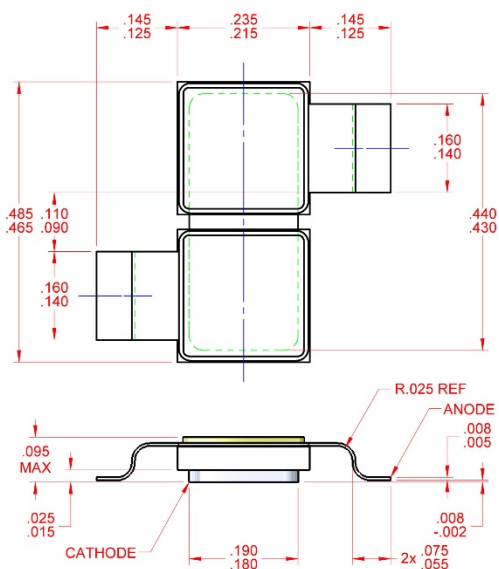
SED40HE150CT1



Package Outline:

SED40HE100CT3

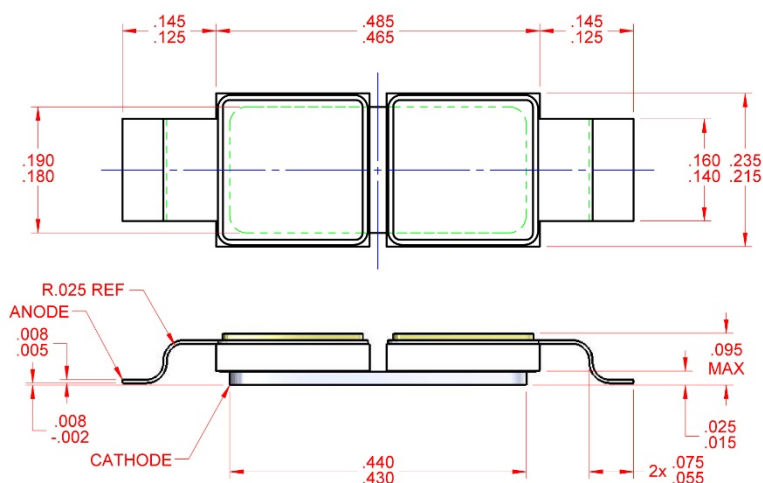
SED40HE150CT3



Package Outline:

SED40HE100CT2

SED40HE150CT2



Configuration	Base	Leads
Common Cathode (CT)	Cathode	Anode

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