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

SED40HE100CT1i thru SED40HE150CT1i Series

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

Designer's Data Sheet

Part Number / Ordering Information [1/]

SED40HE100CT
SED40HE150CT — **i** — **Screening** [2/]
- __ = Not Screened
- TX = TX Level
- TXV = TXV Level
- S = S Level

i = Isolated Case

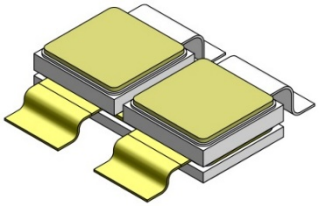
Lead Orientation
- 1 = Front Mount
- 2 = Side Mount
- 3 = Split Mount

FEATURES:
- Very Low Reverse Leakage
- Low Forward Voltage Drop
- Hermetically Sealed, Isolated Power Surface Mount Package
- Guard Ring for Overvoltage Protection
- 175°C Operating Temperature
- Isolated Version (Hot Case Versions Available – Contact Factory)
- Smaller Footprint than TO-25X package
- Weight: 0.95 g typ
- TX, TXV, and Space Level Screening Available[2/]

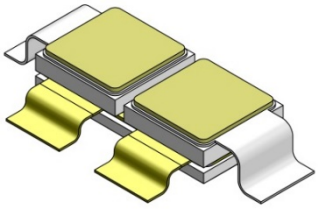
MAXIMUM RATINGS (per leg)[3/]		Symbol	Value	Units
Peak Repetitive and Peak Reverse Voltage	**SED40HE100CT** **SED40HE150CT**	V_{RRM} V_R	100 150	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_C = 100°C)		I_O	20	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, 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)		$R_{\theta JC}$	1.55	**°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 @25ºC.

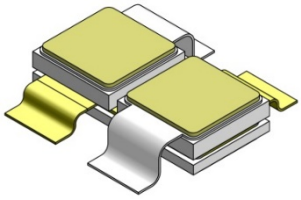
SED40HE100CT1i
SED40HE150CT1i
Front Mount



SED40HE100CT1i
SED40HE150CT1i
Side Mount



SED40HE100CT1i
SED40HE150CT1i
Split Mount



Physical Properties:
Body: Alumina
Lead: Copper, Ag plated with Ni under-plate
Bottom Isolation: AlN DBCu, Tin-Lead finish with Nickel under-plate

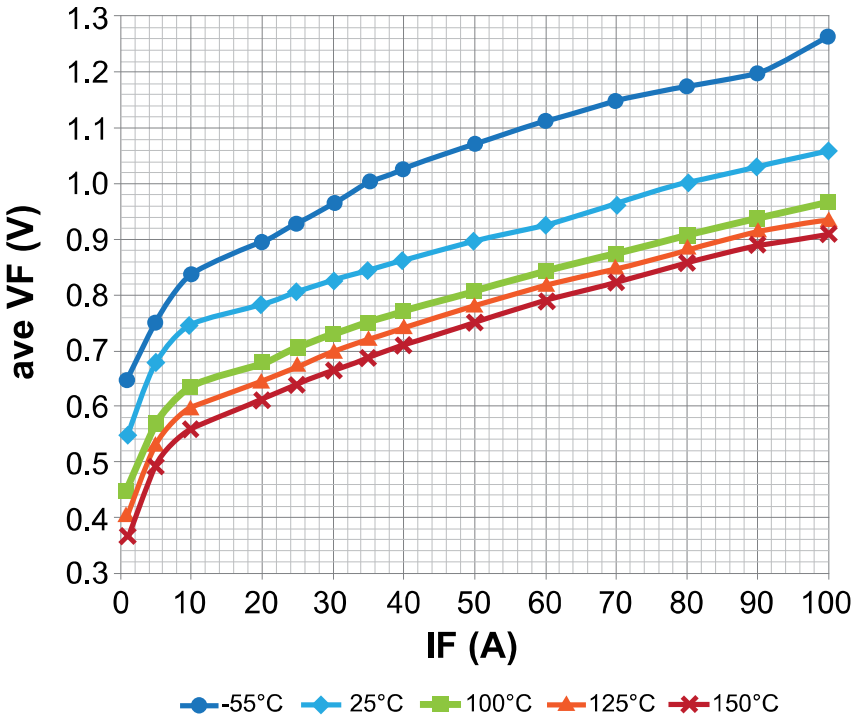
Key:
White = Anode
Yellow = Cathode

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: SH0103C**	**DOC**

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

SED40HE100CT1i thru SED40HE150CT1i Series

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



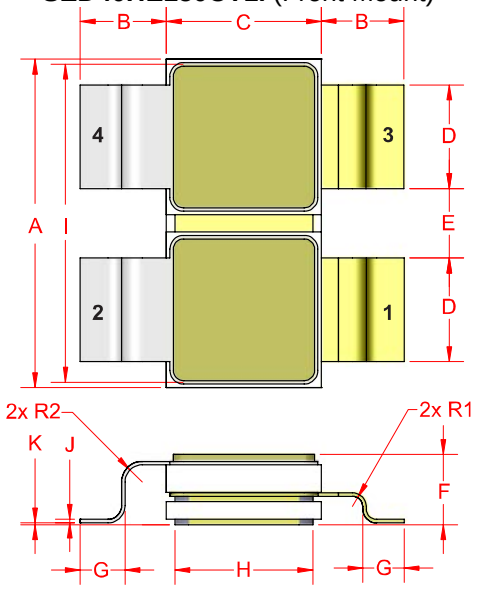
(per leg)

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: SH0103C**	**DOC**

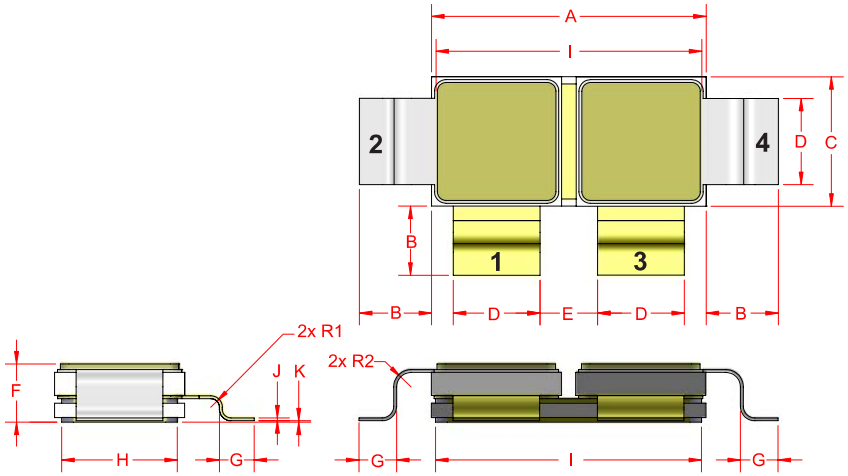
Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638-5223
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SED40HE100CT1i thru SED40HE150CT1i Series

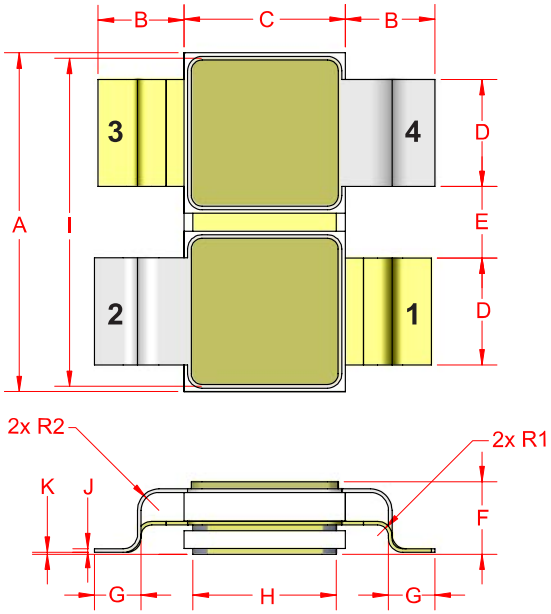
Package Outline: SED40HE100CT1i and SED40HE150CT1i (Front Mount)



Package Outline: SED40HE100CT2i and SED40HE150CT2i (Side Mount)

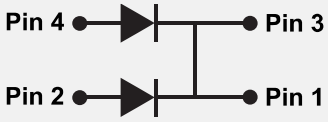


Package Outline: SED40HE100CT3i and SED40HE150CT3i (Split Mount)



DIMENSIONS		
DIM	**MIN**	**MAX**
A	0.465	0.560
B	0.125	0.145
C	0.200	0.235
D	0.140	0.160
E	0.090	0.110
F	-	0.135
G	0.055	0.075
H	0.200	0.210
I (bottom Cu pad)	0.450	0.460
J	0.005	0.008
K	-0.002	0.008
R1	R 0.015 REF	
R2	R 0.025 REF	

PIN ASSIGNMENT



Pin 1 & Pin 3 tied together

Configuration	Pin 1 & Pin 3 (tied together)	Pin 2	Pin 4
Common Cathode (CT)	Cathode	Anode	Anode

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: SH0103C**	**DOC**