

**SURFACE MOUNT
40 AMP, 45 VOLTS
LOW VF CENTERTAP
SCHOTTKY RECTIFIER**

Part Number / Ordering Information^{1/}

i

= None

$$\overline{TX} = TX \text{ Level}$$

TXV = TXV Level

S = S Level

L i = Isolated Case

Lead Orientation

1 = Front Mount

2 = Side Mount

3 = Split Mount

- Low Reverse Leakage
- Low Forward Voltage Drop
- Hermetically Sealed, Isolated Power Surface Mount Package
- Guard Ring for Overvoltage Protection
- Eutectic Die Attach
- 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/}

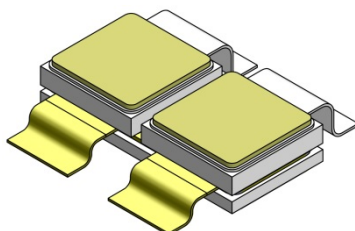
MAXIMUM RATINGS (per leg)	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	V_{RRM} V_{RWM} V_R	45	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 100^{\circ}\text{C}$)	I_O	20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, 1 pulse, $T_A = 25^{\circ}\text{C}$)	I_{FSM}	250	Amps
Operating and Storage Temperature	T_{OP} & T_{stg}	-55 to +175	$^{\circ}\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	1.55	$^{\circ}\text{C/W}$

Notes:

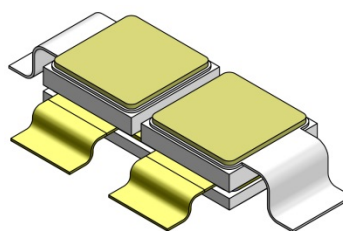
1/ For ordering information, price, operating curves, and availability – contact factory.

2/ Screening based on MIL-PRF-19500. Screening flows available on request.

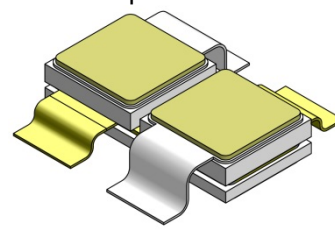
SED40HE45LVCT1i
Front Mount



SED40HE45LVCT2i
Side Mount



SED40HE45LVCT3i
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 #: SH0108A

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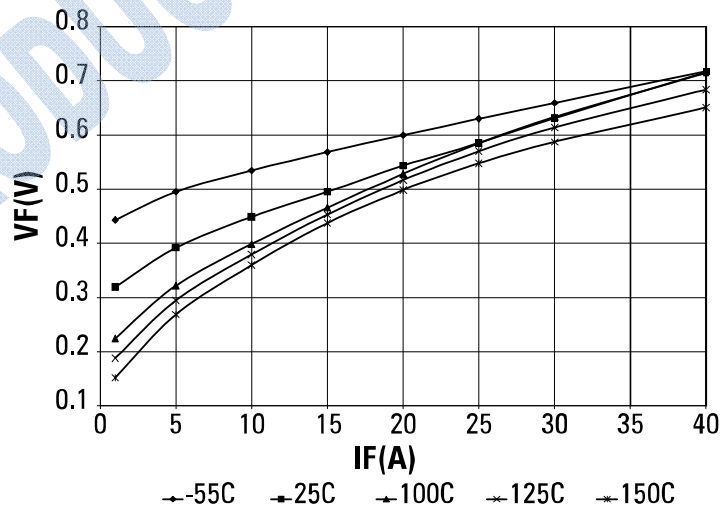
Solid State Devices, Inc.

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

SED40HE45LVCT1i Series

ELECTRICAL CHARACTERISTICS (per leg)		Symbol	Typical	Maximum	Unit
Instantaneous Forward Voltage Drop ($I_F = 5 A_{DC}$, 300 - 500 μ sec pulse)	$T_A = -55^\circ C$	V_{F1}	0.45	-	V_{DC}
	$T_A = 25^\circ C$	V_{F2}	0.40	0.425	
	$T_A = 125^\circ C$	V_{F3}	0.30	-	
Instantaneous Forward Voltage Drop ($I_F = 10 A_{DC}$, 300 - 500 μ sec pulse)	$T_A = -55^\circ C$	V_{F4}	0.54	-	V_{DC}
	$T_A = 25^\circ C$	V_{F5}	0.45	0.48	
	$T_A = 125^\circ C$	V_{F6}	0.38	0.43	
Instantaneous Forward Voltage Drop ($I_F = 20 A_{DC}$, 300 - 500 μ sec pulse)	$T_A = -55^\circ C$	V_{F7}	0.60	-	V_{DC}
	$T_A = 25^\circ C$	V_{F8}	0.55	0.59	
	$T_A = 125^\circ C$	V_{F9}	0.52	-	
Reverse Leakage Current (Rated V_R , 300 μ sec pulse minimum)	$T_A = 25^\circ C$	I_{R1}	0.125	1	mA
	$T_A = 100^\circ C$	I_{R2}	20	-	
	$T_A = 125^\circ C$	I_{R3}	25	50	
Junction Capacitance ($T_A = 25^\circ C$, $f = 1$ MHz)	$V_R = 5V$	C_{J1}	720	900	pF
	$V_R = 10V$	C_{J2}	540	-	

SED40HE45LV (per leg): V_F (typical) vs. I_F



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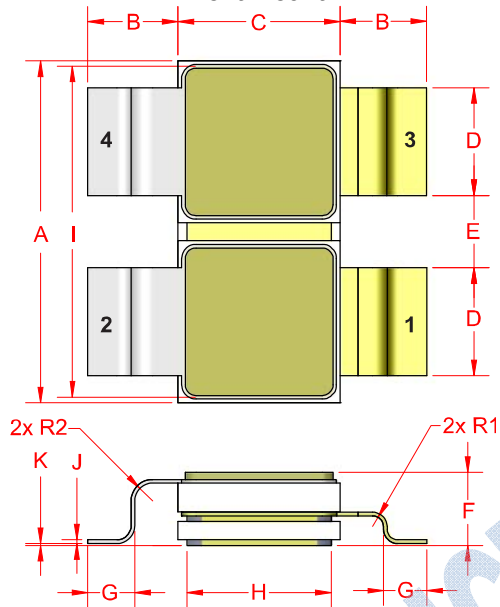
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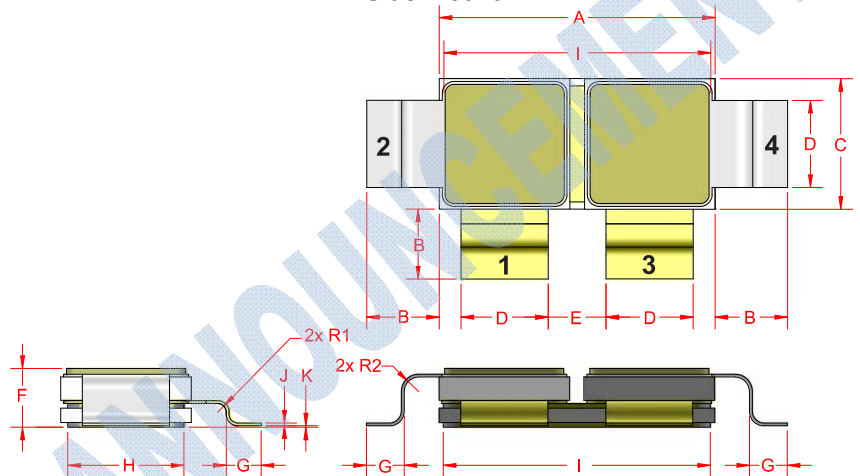
CASE OUTLINE: SED40HE45LVCT1i

Front Mount



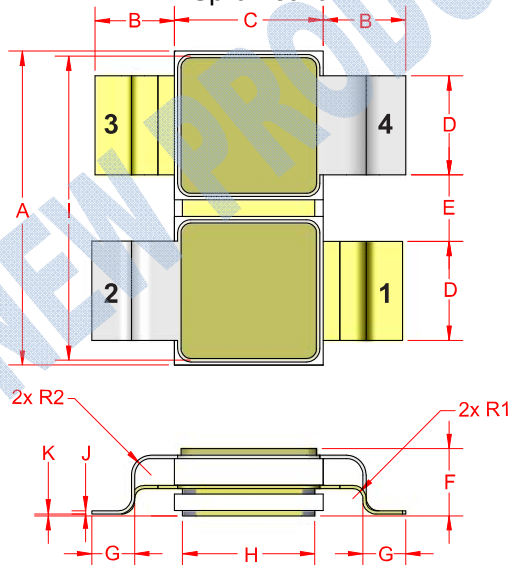
CASE OUTLINE: SED40HE45LVCT2i

Side Mount



CASE OUTLINE: SED40HE45LVCT3i

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 4 ● —|— Pin 3

Pin 2 ● —|— Pin 1

Pin 1 & Pin 3 tied together

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

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