

FEATURES

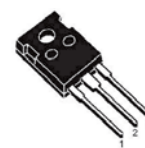
- High junction temperature capability
- Low leakage current
- Low thermal resistance
- High frequency operation
- Avalanche specification
- Component in accordance to RoHS 2011/65/EU



TO-3PN
SR6060KT

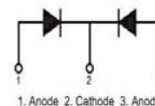


TO-247AB
SR6060PT



MECHANICAL DATA

- Case: JEDEC TO-3PN, TO-247AB
- Molding compound meets UL94V-0 flammability rating
- Terminals: Lead solderable per J-STD-002 and JESD22-B102
- Polarity: As marked
- Mounting Torque: 10 in-lbs maximum



TYPICAL APPLICATIONS

- Switching Power Supply
- Power Switching Circuits
- General Purpose

PRIMARY CHARACTERISTICS	
$I_F(AV)$	30A
V_{RRM}	60V
I_{FSM}	300A
V_f at $I_F=30.0A, 25^\circ C$ Per leg	0.73V
I_R	100 μA
$T_J(MAX)$	150 $^\circ C$
Package	TO-3PN, TO-247AB
Diode variations	Common cathode

MAXIMUM RATINGS

(Ratings at 25 $^\circ C$ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	60	V
Maximum average forward rectified current (see fig.1)	Per leg	30.0	A
	Total device	60.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	I_{FSM}	300	A
Operating junction and Storage temperature range	T_J, T_{stg}	-55 to +150	$^\circ C$

RATINGS AND CHARACTERISTIC OF SR6060KT,SR6060PT

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	I _F =20.0A		V _F ¹⁾	0.61	0.68	V
	I _F =30.0A			0.68	0.73	
	I _F =30.0A, T _α =125°C			-	0.68	
	I _F =40.0A			0.78	0.90	
Reverse current	V _R =60V	T _A =25°C	I _R ²⁾	10	100	μA
		T _A =125°C		-	20	mA
Typical junction capacitance	4V, 1MHz		C _J	840		pF

Notes: 1.Pulse test: 300 μs pulse width, 1% duty cycle

2.Pulse test: pulse width ≤ 40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-3PN	TO-247	Unit
Typical thermal resistance ³⁾	R _{θJC}	0.65	0.55	°C/W

3.Thermal resistance from junction to case

AVAILABALE PACK INFORMATION

Product Model	Package Type	Mark Name	RoHS	Package	Quantity
SR6060KT	TO-3PN	SR6060KT	Pb -free	Tube	300/box
SR6060PT	TO-247AB	SR6060PT	Pb -free	Tube	300/box

RATINGS AND CHARACTERISTIC OF SR6060KT,SR6060PT

FIGURE 1. Total capacitance vs Voltage

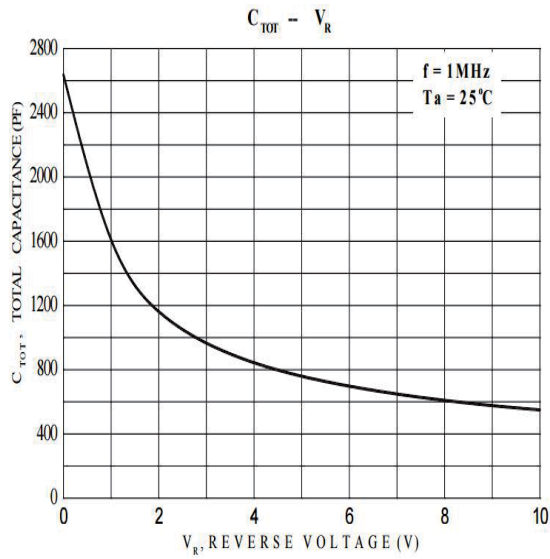


FIGURE 2. REVERSE CURRENT vs REVERSE VOLTAGE

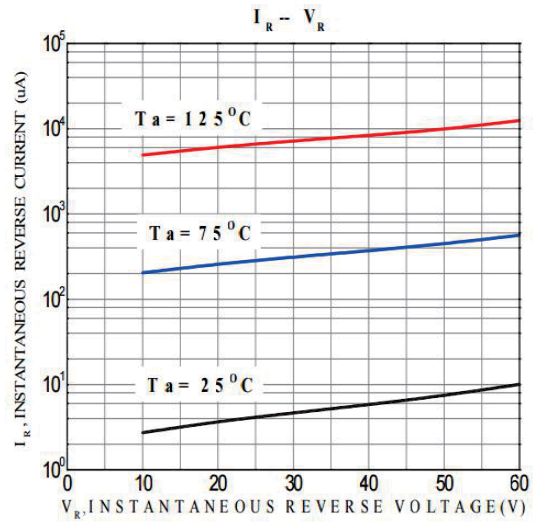


FIGURE 3. FORWARD CURRENT vs FORWARD VOLTAGE

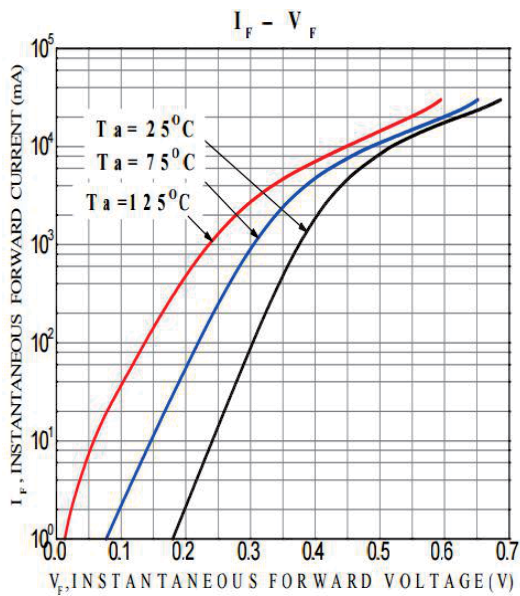
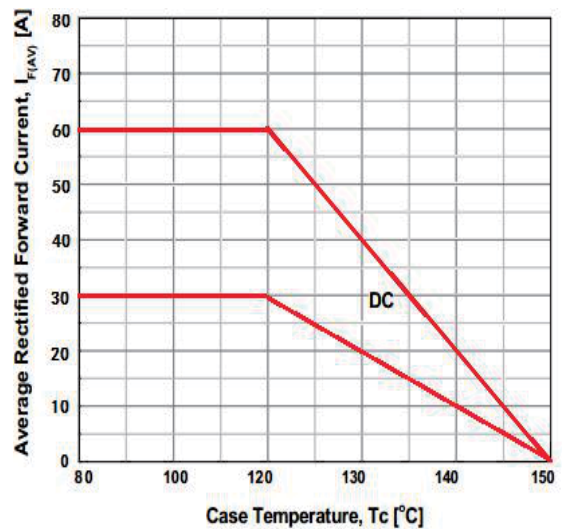
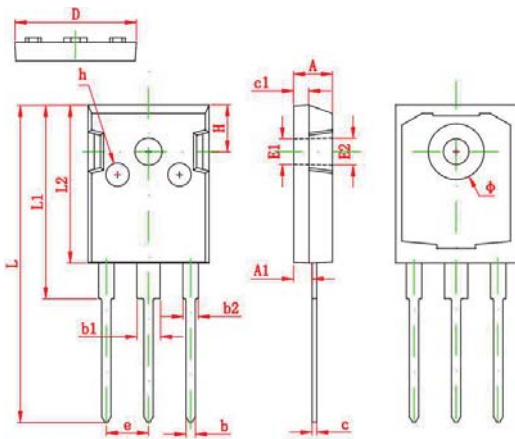


FIGURE 4. CURRENT DERATING CURVE



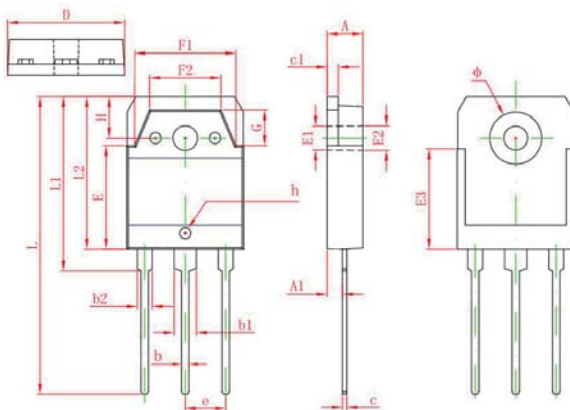
PACKAGE OUTLINE DIMENSIONS

TO-247AB PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.850	5.150	0.191	0.200
A1	2.200	2.600	0.087	0.102
b	1.000	1.400	0.039	0.055
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.900	2.100	0.075	0.083
D	15.450	15.750	0.608	0.620
E1	3.500 REF		0.138 REF	
E2	3.600 REF		0.142 REF	
L	40.900	41.300	1.610	1.626
L1	24.800	25.100	0.976	0.988
L2	20.300	20.600	0.799	0.811
φ	7.100	7.300	0.280	0.287
e	5.450 TYP		0.215 TYP	
H	5.980 REF		0.235 REF	
h	0.000	0.300	0.000	0.012

TO-3PN PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.600	5.000	0.181	0.197
A1	2.200	2.600	0.087	0.102
b	0.800	1.200	0.031	0.047
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.450	1.650	0.057	0.065
D	15.450	15.850	0.608	0.624
E	13.700	14.100	0.539	0.555
E1	3.200 REF		0.126 REF	
E2	3.300 REF		0.130 REF	
E3	13.450 REF		0.530 REF	
F1	13.400	13.800	0.528	0.543
F2	9.400	9.800	0.370	0.386
L	39.900	40.300	1.571	1.587
L1	23.200	23.600	0.913	0.929
L2	20.300	20.600	0.799	0.811
φ	6.900	7.100	0.272	0.280
G	5.150	5.550	0.203	0.219
e	5.450 TYP		0.215 TYP	
H	5.000 REF		0.197 REF	
h	0.000	0.300	0.000	0.012