Pb Free Plating Product

S16ACD2 thru S16MCD2

16.0 Amperes Surface Mount Dual Common Cathode General Purpose Rectifiers

Features

- ✶ Avalanche energy rated(100% guarantee)
- ✶ Low forward voltage drop
- ✶ High current capability
- ✶ Low reverse leakage current
- ✶ High surge current capability

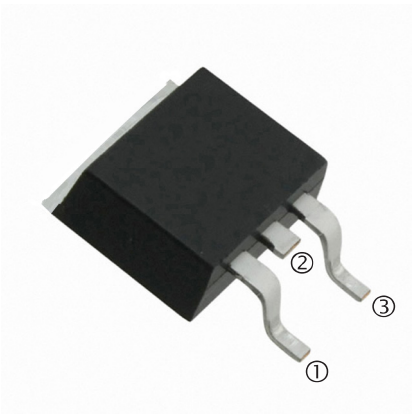
Application

- ✶ PhotoVoltaic BY-PASS DIODE
- ✶ PhotoVoltaic High-amperage Combiner Boxes
- ✶ Alternator(Automotive Wireharness/Capacitor Bank)

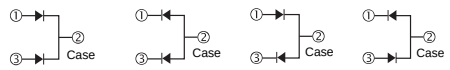
Mechanical Data

- ✶ Case: Surface Mount TO-220(SMD/SMT TO-220)
- ✶ Epoxy: UL 94V-0 rate flame retardant
- ✶ Terminals: Solderable per MIL-STD-202 method 208
- ✶ Polarity: As marked on diode body
- ✶ Mounting position: Any
- ✶ Weight: 2.2 gram approximately

TO-263AB/D2PAK



Internal Configuration



Positive Common Cathode Suffix "CD2"

Negative Common Anode Suffix "AD2"

Doubler Tandem Polarity Suffix "DD2"

Series Tandem Polarity Suffix "SD2"

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)									
PARAMETER	SYMBOL	S16A CD2	S16B CD2	S16D CD2	S16G CD2	S16J CD2	S16K CD2	S16M CD2	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	16							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	150							A
Maximum instantaneous forward voltage (Note 1) @ 8 A	V_F	1.1							V
Maximum reverse current @ rated V_R T_J=25°C T_J=125°C	I_R	10 250							μA
Typical junction capacitance (Note 2)	C_J	50							pF
Typical thermal resistance	$R_{\theta JC}$	1.5							°C/W
Operating junction temperature range	T_J	- 55 to +150							°C
Storage temperature range	T_{STG}	- 55 to +150							°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Measured at 1 MHz and applied reverse voltage of 4.0 V DC.

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RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 MAXMUM FORWARD CURRENT DERATING CURVE

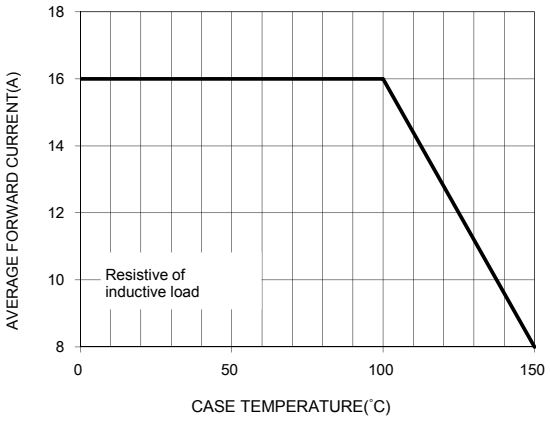


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

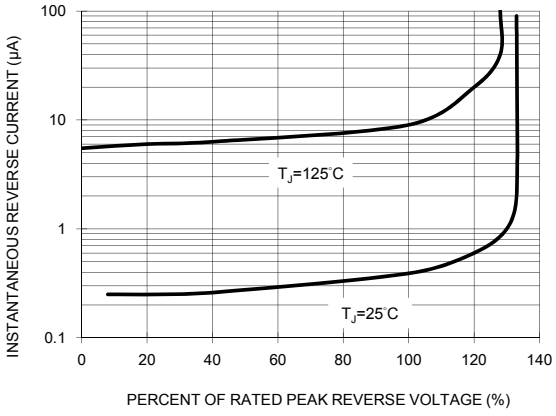


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

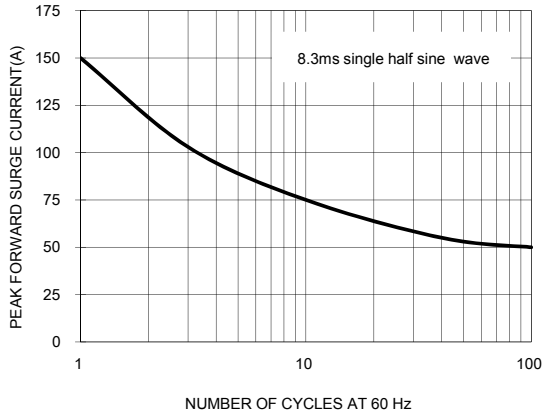


FIG. 4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

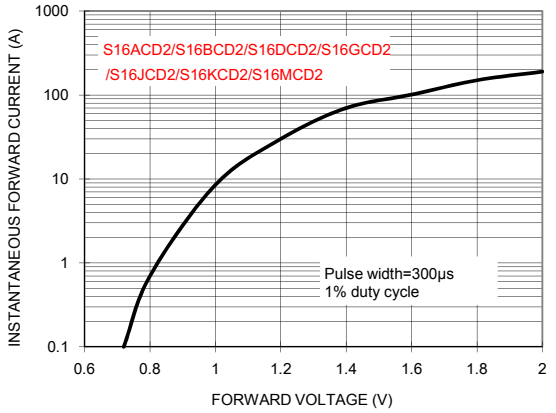
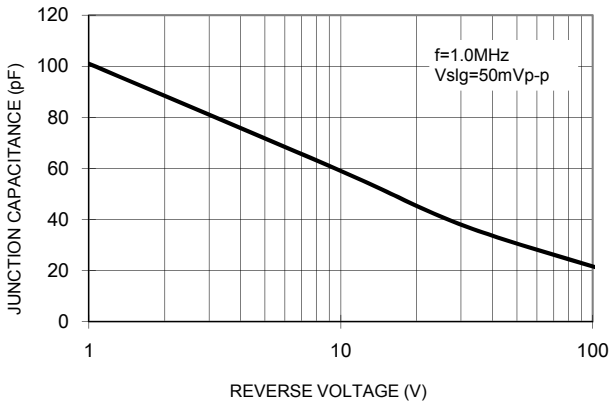


FIG. 5 TYPICAL JUNCTION CAPACITANCE

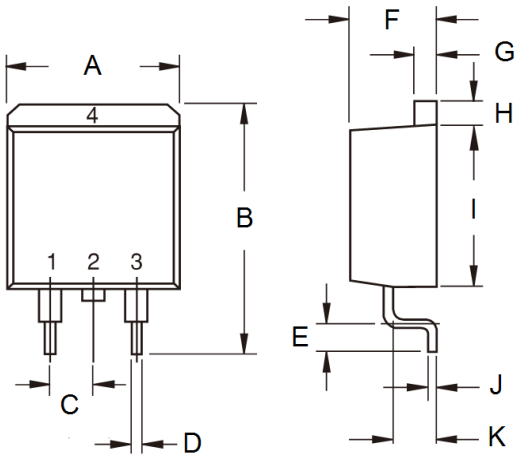


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TO-263AB/D2PAK Package Outline Dimensions:

TO-263/D2PAK PACKAGE OUTLINE



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.5	-	0.413
B	14.60	15.88	0.575	0.625
C	2.41	2.67	0.095	0.105
D	0.68	0.94	0.027	0.037
E	2.29	2.79	0.090	0.110
F	4.44	4.70	0.175	0.185
G	1.14	1.40	0.045	0.055
H	1.14	1.40	0.045	0.055
I	8.25	9.25	0.325	0.364
J	0.36	0.53	0.014	0.021
K	2.03	2.79	0.080	0.110

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