

Pb Free Plating Product

S16ADD2 thru S16MDD2



16.0 Amperes Surface Mount Dual Doubler Polarity General Purpose Rectifiers

Features

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

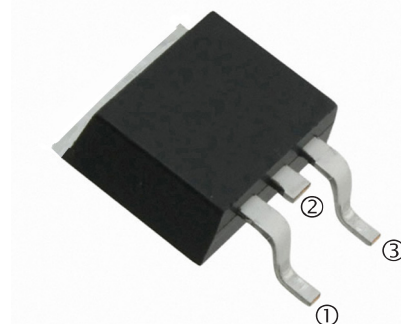
Application

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

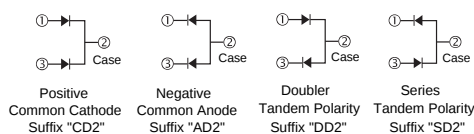
Mechanical Data

- ★ 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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	S16A DD2	S16B DD2	S16D DD2	S16G DD2	S16J DD2	S16K DD2	S16M DD2	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 $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	10 250							μA
Typical junction capacitance (Note 2)	C_J	50							pF
Typical thermal resistance	$R_{\theta JC}$	1.5							$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 to +150							$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to +150							$^\circ\text{C}$

Note 1: Pulse test with $PW=300\mu\text{s}$, 1% duty cycle

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

RATINGS AND CHARACTERISTICS CURVES

($T_A=25^{\circ}\text{C}$ unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT
DERATING CURVE

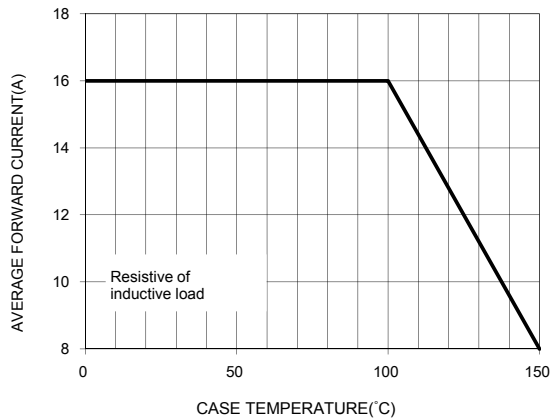


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

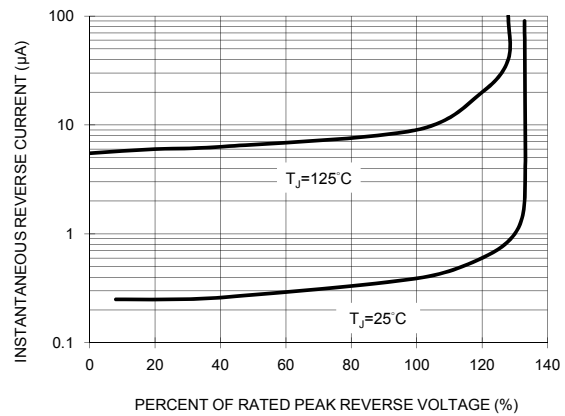


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

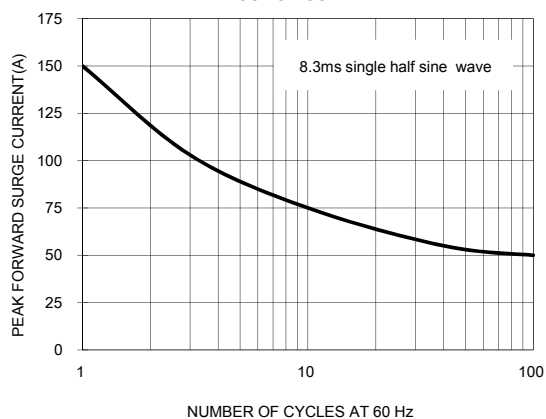


FIG. 4 TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

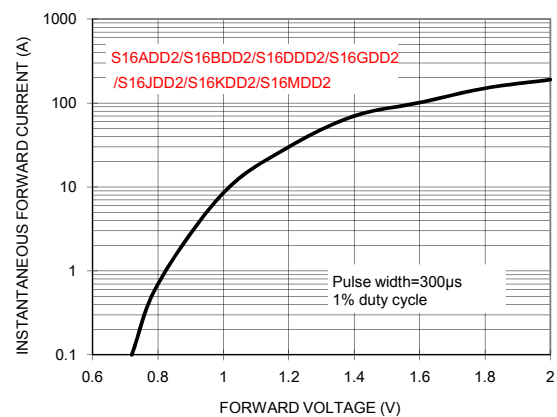
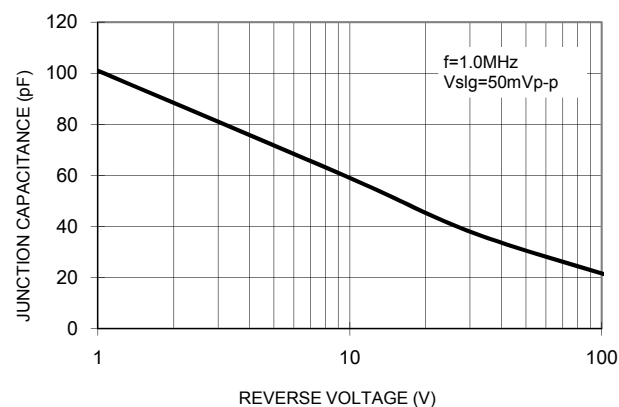
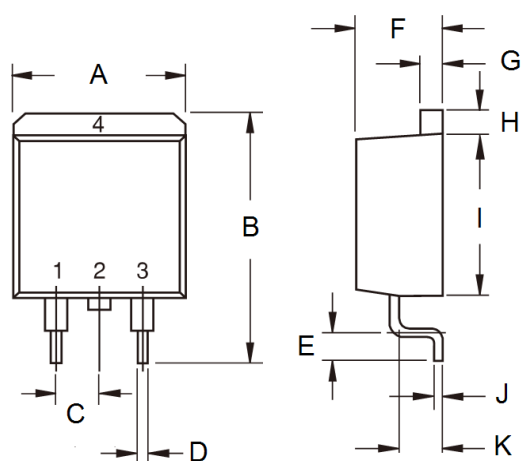


FIG. 5 TYPICAL JUNCTION CAPACITANCE



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