LITE-ON SEMICONDUCTOR

1N4001 thru 1N4007

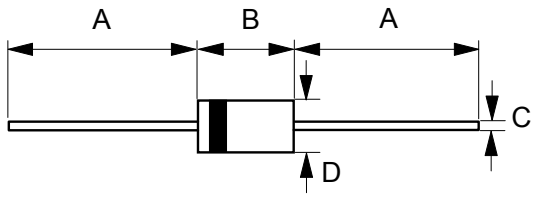
PLASTIC SILICON RECTIFIERS

REVERSE VOLTAGE – 50 to 1000 Volts
FORWARD CURRENT – 1.0 Ampere

FEATURES
- Low cost
- Diffused junction
- Low forward voltage drop
- Low reverse leakage current
- High current capability

MECHANICAL DATA
- Case: JEDEC DO-41, molding compound has UL flammability classification 94V-0
- Polarity: Color band denotes cathode
- Weight: 0.012 ounces, 0.34 grams
- Mounting Position: Any

DO - 41



DO - 41		
DIM	MIN	MAX
A	25.4	--
B	4.10	5.20
C	0.71 Ø	0.86 Ø
D	2.00 Ø	2.70 Ø
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average rectified output current per device @T_A=75°C	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
I^2t rating for fusing (t = 8.3ms)	I^2t	3.7							A^2S
Operating temperature range	T_J	-55 to +125							°C
Storage temperature range	T_{STG}	-55 to +150							°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX.	UNIT
Forward voltage	I_F = 1.0A T_J = 25°C	V_F	1.0	V
Leakage current	V_R at rated T_J = 25°C T_J = 100°C	I_R	10 50	uA
Typical junction capacitance (Note 1)		C_J	15	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Thermal resistance (Note 2)	$RthJ_A$ $RthJ_C$	50 12	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MIN.	MAX.	UNIT
Reverse recovery time	IF= 0.5A, I_{RR}= 0.25A, I_R =1.0A	T_{RR}	0.5	5.0	us

REV. 9, MAY-2015, KDAC01

Note :
(1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC
(2) Thermal resistance junction to ambient and case,

RATING AND CHARACTERISTIC CURVES
1N4001 thru 1N4007

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

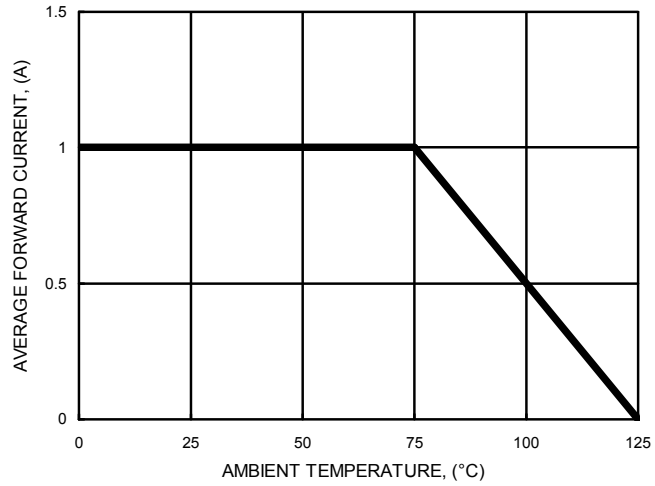


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

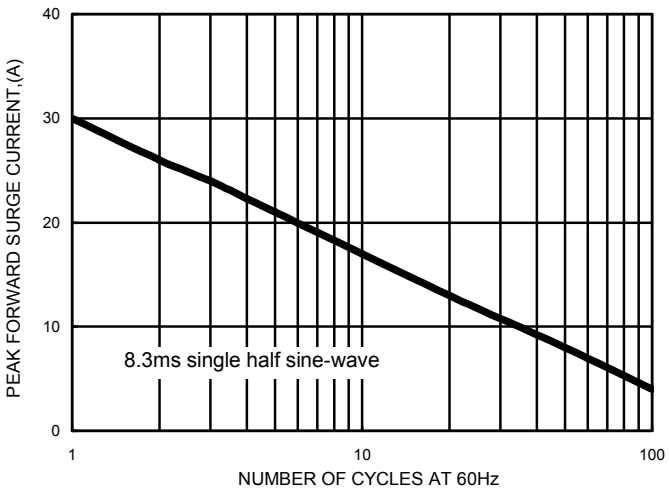


FIG.3- TYPICAL FORWORD CHARACTERISTICS

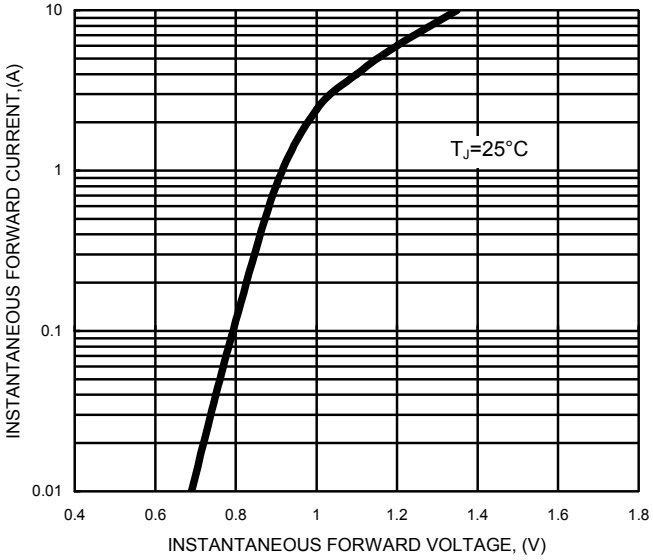
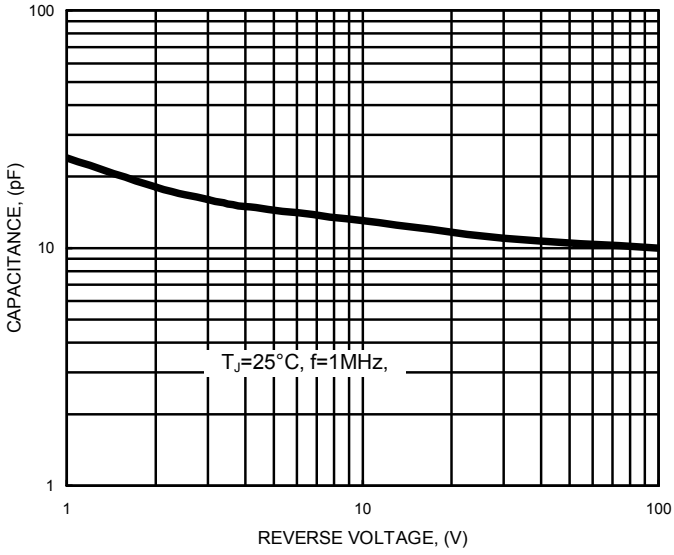


FIG.4- TYPICAL JUNCTION CAPACITANCE



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