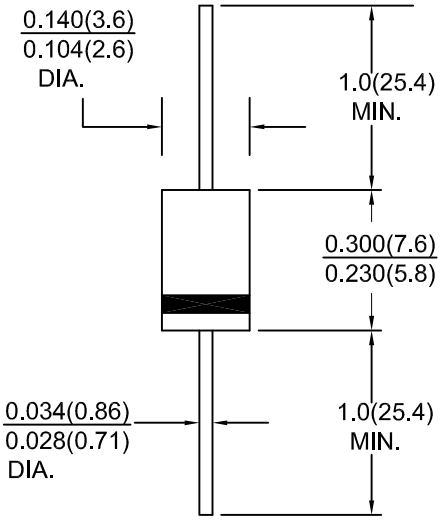
FR151 THRU FR157

FAST RECOVERY SILICON RECTIFIERS

FEATURES:

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

DO-204AC(DO-15)



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case : Molded plastic use UL 94V-0 recognized flame retardant epoxy

Terminals : Axial leads, solderable per MIL-STD-202F, Method 208

Polarity : Color band on body denotes cathode

Mounting Position : Any

Weight : 0.35 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temp. unless otherwise specified.

Single phase, half sine wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

Characteristic	Symbol	FR 151	FR 152	FR 153	FR 154	FR 155	FR 156	FR 157	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at Ta=55℃	$I_{(AV)}$	1.5							Amps
Peak forward surge current ,8.3ms single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	50.0							Amps
Maximum instantaneous forward voltage drop at 1.5 A	V_F	1.30							Volts
Maximum DC reverse current at rated DC blocking voltage Ta=25℃ / Ta=55℃	I_R	5.0 / 30.0							μA
Typical reverse recovery time (note 1)	trr	150	150	150	150	250	500	500	nS
Typical junction capacitance (note 2)	C_j	20							pF
Operating junction and storage temperature range	T_j, T_{stg}	-65 to +125			-65 to +150				℃

NOTES:1. Reverse recovery test condition; I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

2. Measured at 1MHz and Applied reverse voltage of 4.0V DC

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIER CURRENT

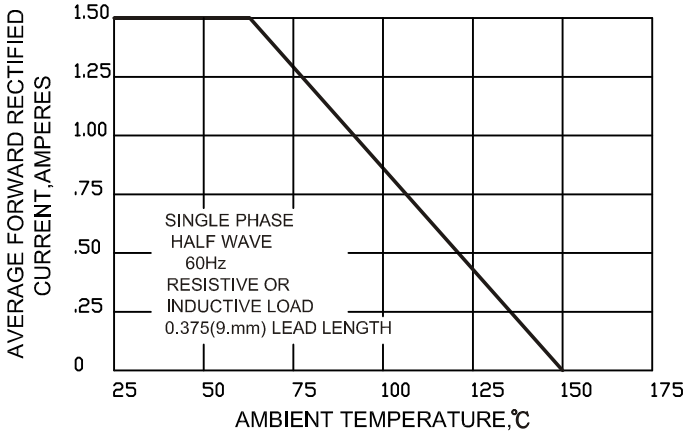


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

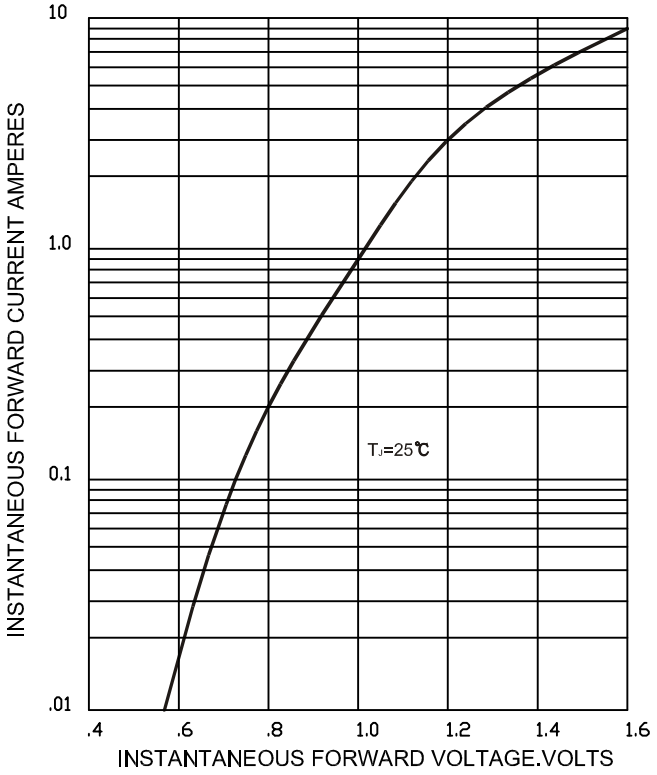


FIG.3-TYPICAL JUNCTION CAPACITANCE

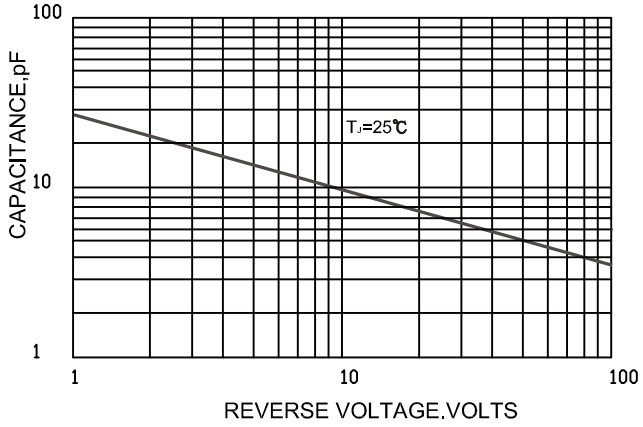


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

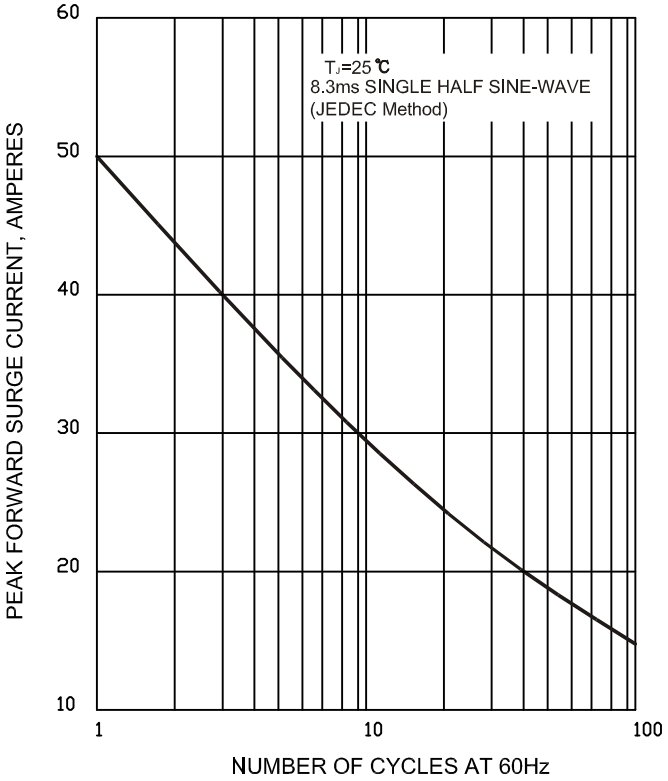
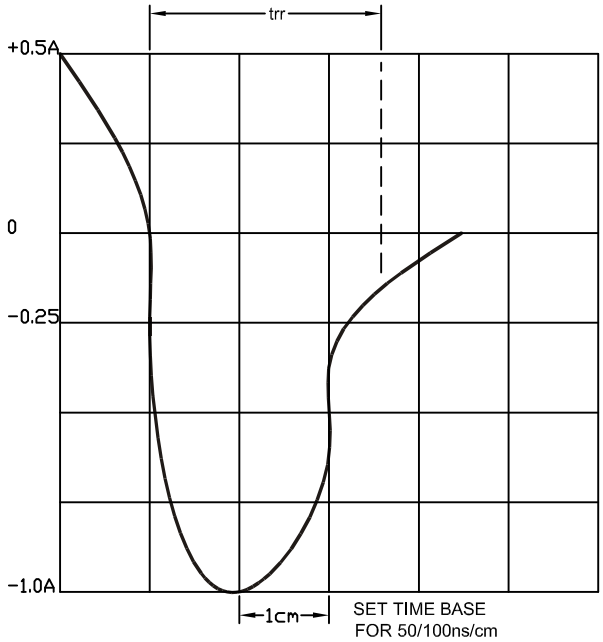



FIG.5-REVERSE RECOVERY TIME CHARACTERISTICS