



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

1N4148
1N4448
1N4150
1N4151

TECHNICAL SPECIFICATIONS OF HIGH SPEED SWITCHING DIODES

VOLTAGE RANGE - 50 to 100 Volts

POWER - 500 mWatts

FEATURES

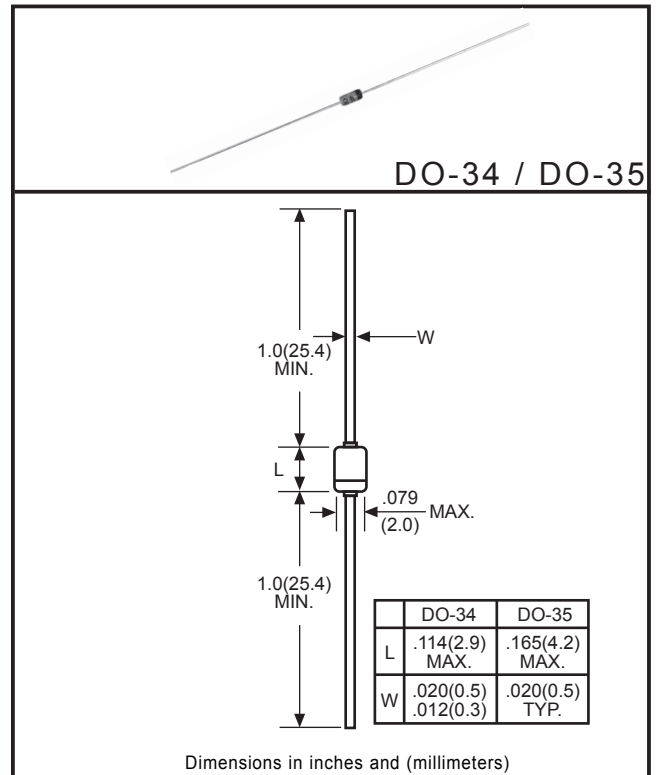
- * Fast switching speed
- * Silicon epitaxial planar diodes
- * Low power loss, high efficiency
- * Low leakage
- * High surge forward current capability

MECHANICAL DATA

- * Case: Glass sealed case
- * Terminals: Solder plated, solderable per MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.13 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



	SYMBOL	1N4148	1N4448	1N4150	1N4151	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	100	100	50	75	V
Maximum Average Forward Current	I _{FAV}	150	150	200	150	mA
Maximum Power Dissipation T _A = 25°C	P _{tot}	500	500	500	500	mW
Maximum Forward Voltage	V _F @I _F	1.0/10	1.0/100	1.0/200	1.0/50	V/mA
Maximum Reverse Current	I _R @V _R	5/75	5/75	0.1/50	0.05/50	µA/V
Maximum Reverse Recovery Time	t _{rr}	4.0	4.0	4.0	2.0	nS
Typical Thermal Resistance	R _{θJA}	300	350	350	350	°C/W
Typical Junction Capacitance	C _J	4.0	4.0	4.0	2.0	pF
Surge Forward Current, t < 1µs	I _{FSM}	2000	2000	4000	2000	mA
t < 1s		500				
Operating and Storage Temperature Range	T _J ,T _{STG}	-65 to +175				°C

NOTES: 1. C_J at V_R = 0, f = 1 MHz.
2. From I_F = 10mA to I_R = 1mA, V_R = 6Volts, R_L = 100Ω
3. Suffix "M" stands for DO-34 package, (e.g.: 1N4148M / 1N4448M...etc)

RATING AND CHARACTERISTIC CURVES (1N4148)

FIG. 1
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

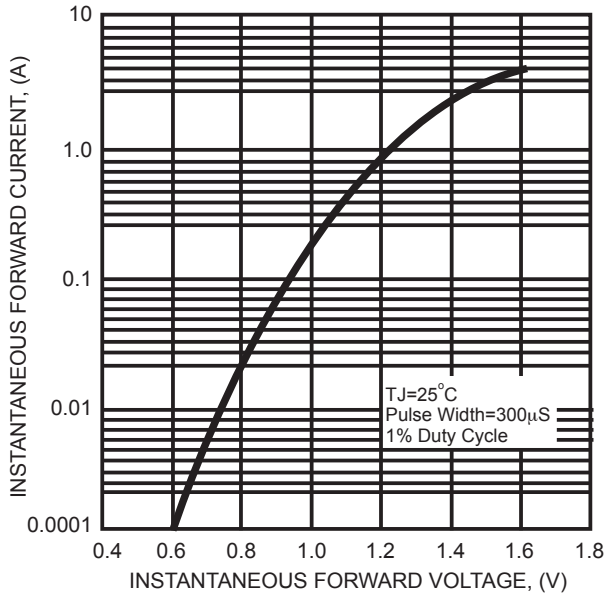


FIG. 2
TYPICAL FORWARD CURRENT
DERATING CURVE

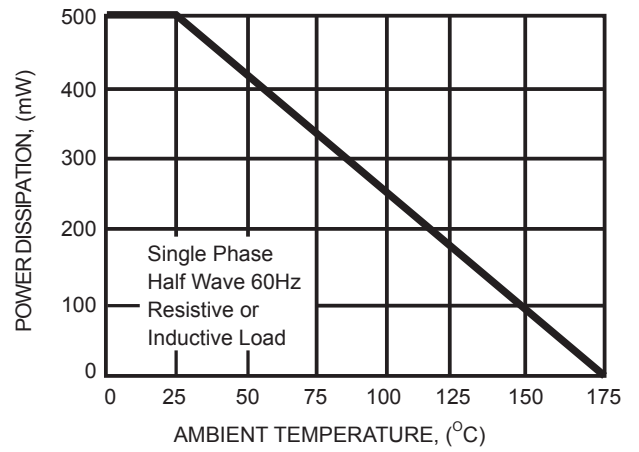
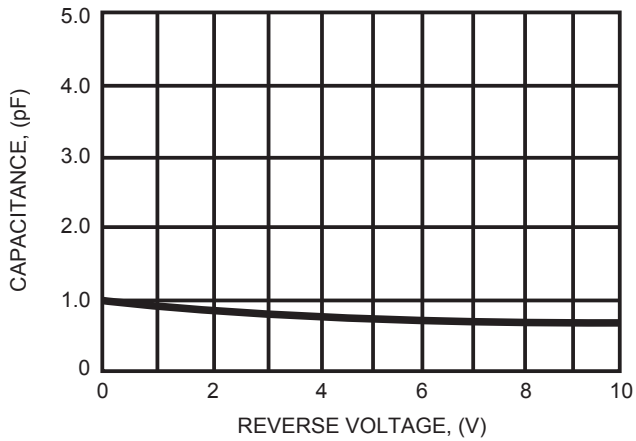


FIG. 3
TYPICAL JUNCTION CAPACITANCE



RATING AND CHARACTERISTIC CURVES (1N4448)

FIG. 1
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

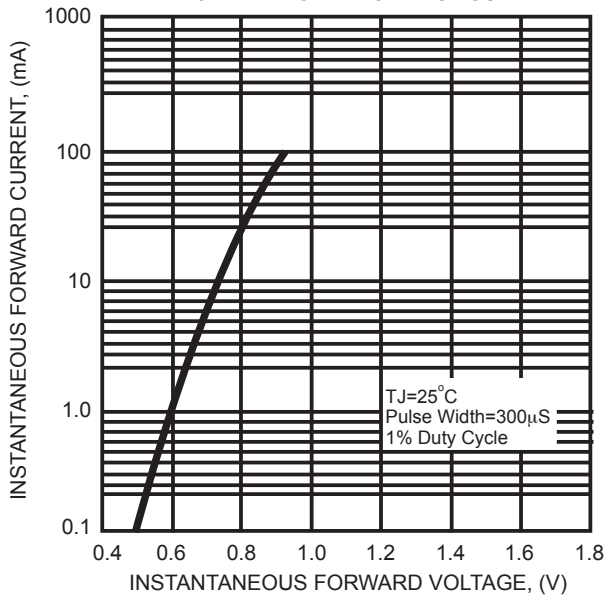


FIG. 2
TYPICAL FORWARD CURRENT
DERATING CURVE

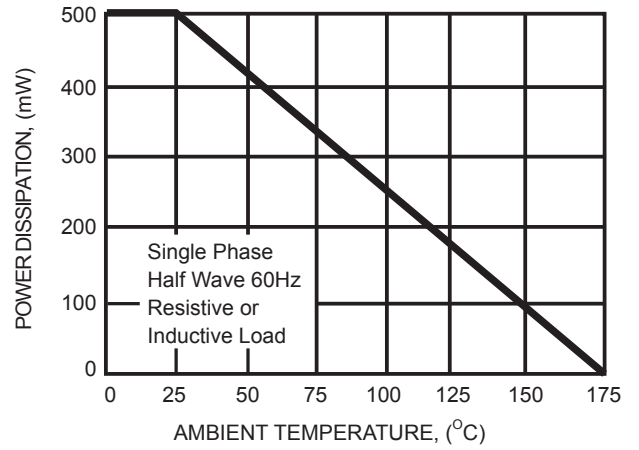
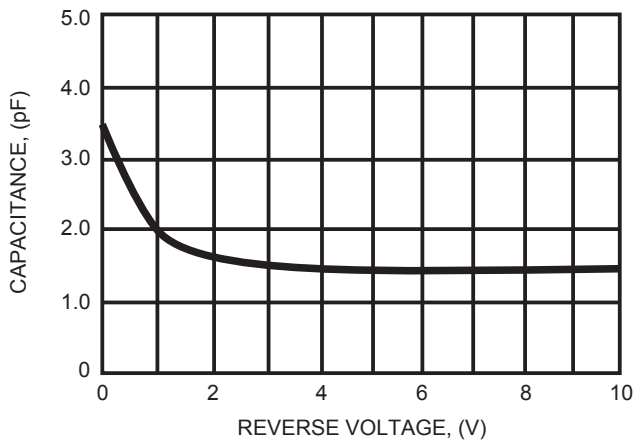


FIG. 3
TYPICAL JUNCTION CAPACITANCE



RATING AND CHARACTERISTIC CURVES (1N4150)

FIG. 1
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

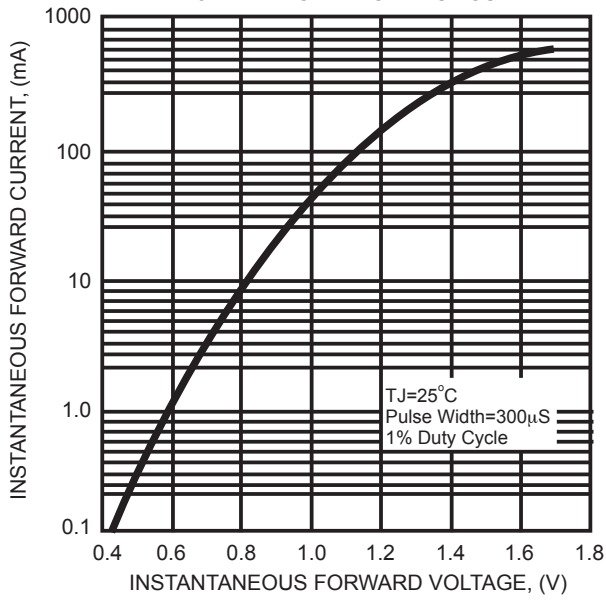


FIG. 2
TYPICAL FORWARD CURRENT
DERATING CURVE

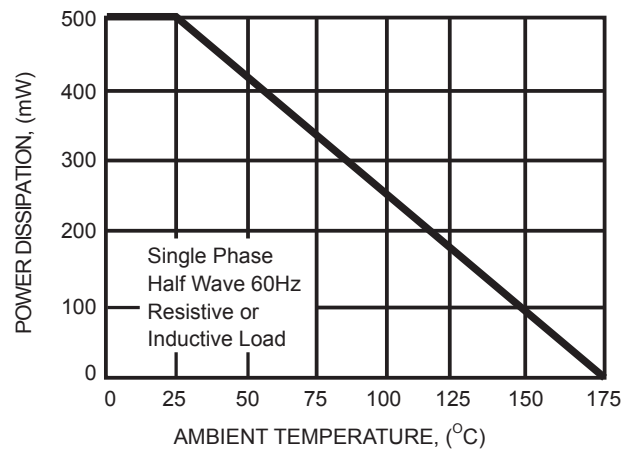
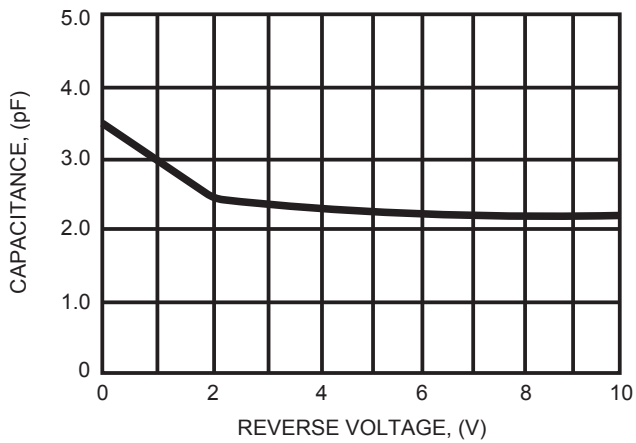


FIG. 3
TYPICAL JUNCTION CAPACITANCE



RATING AND CHARACTERISTIC CURVES (1N4151)

FIG. 1
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

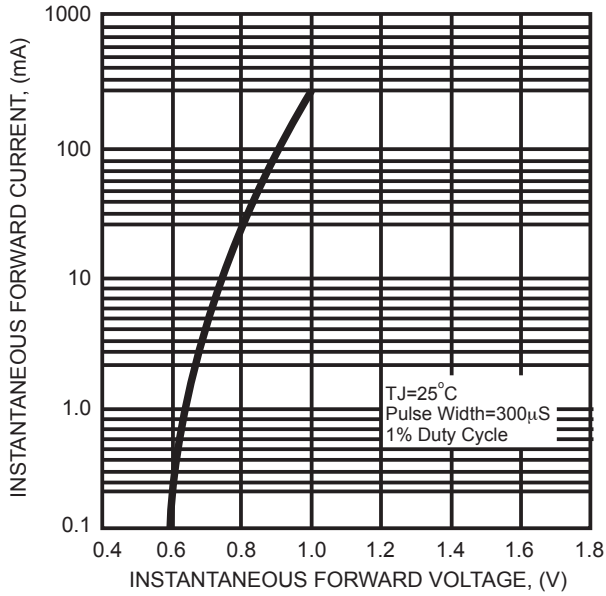


FIG. 2
TYPICAL FORWARD CURRENT
DERATING CURVE

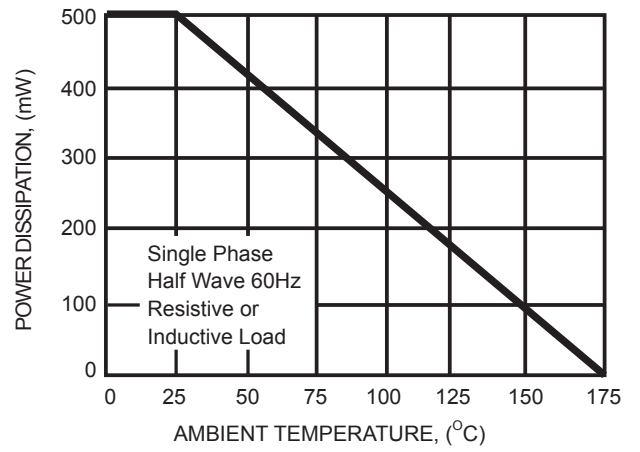
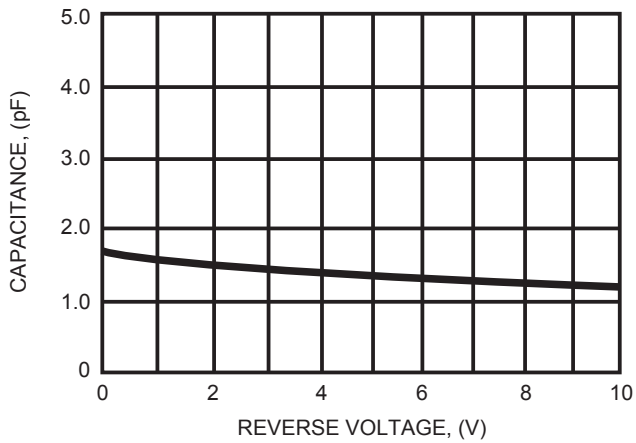


FIG. 3
TYPICAL JUNCTION CAPACITANCE



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