



DFD05T

Diffused Junction Type Silicon Diode

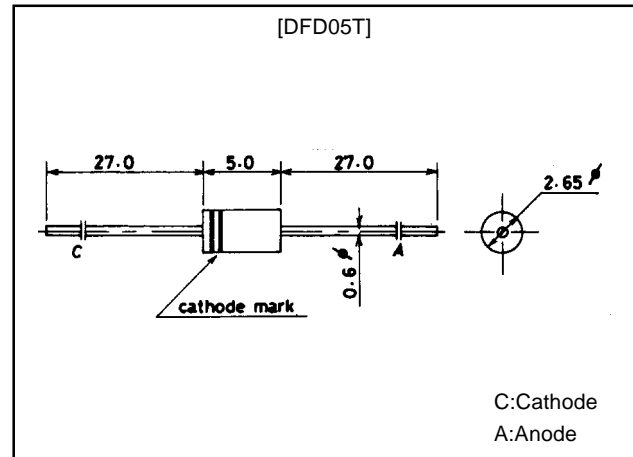
0.5A Power Rectifier

Features

- High-speed switching use.
- Plastic molded structure.
- Reverse recovery time $t_{rr}=0.15\mu\text{s}$ max (B, C, E, G).
 $t_{rr}=0.3\mu\text{s}$ max (J, L, N, R, T).
- Peak reverse voltage: $V_{RM}=100$ to 1700V
- Average rectified current $I_O=0.5\text{A}$

Package Dimensions

unit:mm
1174



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

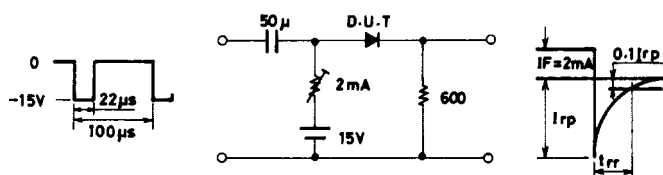
Parameter	Symbol	Conditions	DFD05TB	DFD05TC	DFD05TE	DFD05TG	Unit
Peak Reverse Voltage	V_{RM}		100	200	400	600	V
Average Rectified Current	I_O	$T_a=50^\circ\text{C}$	→	→	→	0.5	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	→	→	→	30	A
Junction Temperature	T_j		→	→	→	150	$^\circ\text{C}$
Storage Temperature	T_{stg}		→	→	→	-40 to +150	$^\circ\text{C}$

Parameter	Symbol	Conditions	DFD05TJ	DFD05TL	DFD05TN	DFD05TR	DFD05TT	Unit
Peak Reverse Voltage	V_{RM}		800	1000	1200	1500	1700	V
Average Rectified Current	I_O	$T_a=50^\circ\text{C}$	→	→	→	→	0.5	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	→	→	→	→	20	A
Junction Temperature	T_j		→	→	→	→	125	$^\circ\text{C}$
Storage Temperature	T_{stg}		→	→	→	→	-40 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

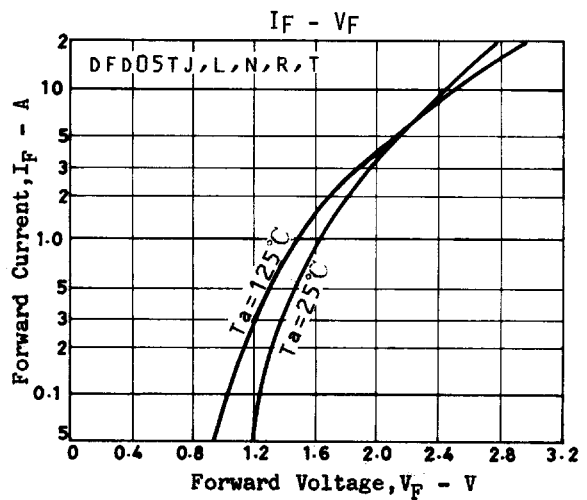
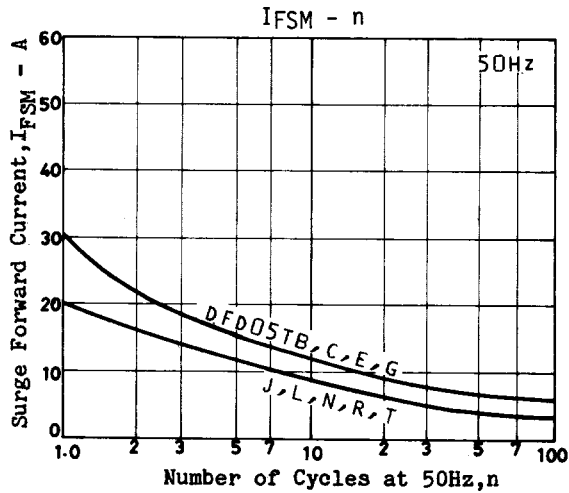
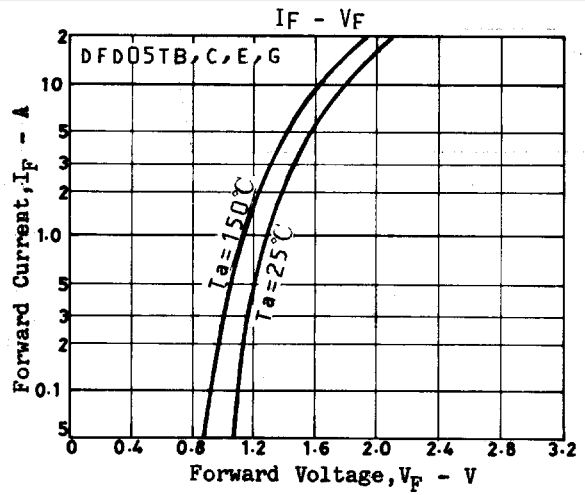
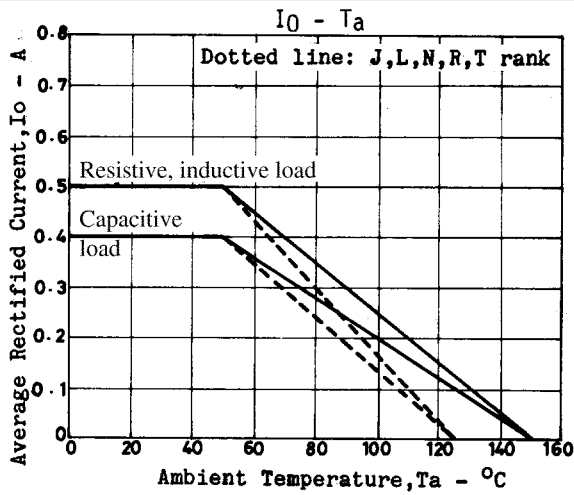
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Voltage	V_F	$I_F=0.5\text{A}$ (B, C, E, G)			1.2	V
		$I_F=0.5\text{A}$ (J, L, N, R, T)			1.5	V
Reverse Current	I_R	V_R :At each V_{RM}			10	μA
Reverse Recovery Time	t_{rr}	$I_F=2\text{mA}$, $V_R=15\text{V}$ (B, C, E, G)			0.15	μs
		$I_F=2\text{mA}$, $V_R=15\text{V}$ (J, L, N, R, T)			0.3	μs

Reverse Recovery Time Test Circuit



Unit (resistance:Ω, capacitance:F)

DFD05T



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