

**DFD05T**

Diffused Junction Type Silicon Diode

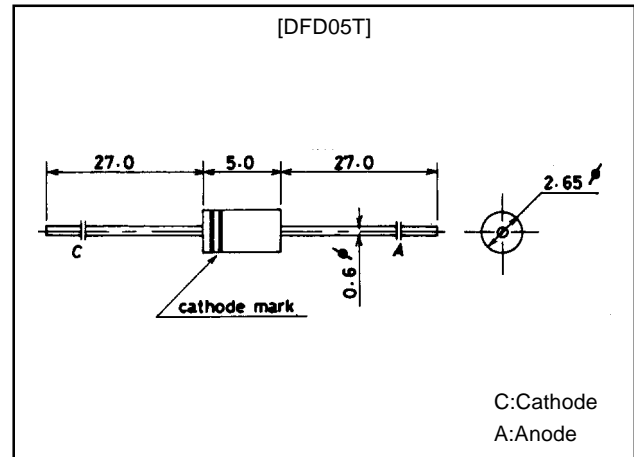
**0.5A Power Rectifier****Features**

- 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  $1700\text{V}$
- Average rectified current  $I_O=0.5\text{A}$

**Package Dimensions**

unit:mm

1174

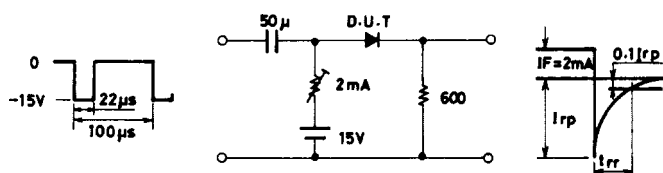
**Specifications****Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

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	$^\circ\text{C}$

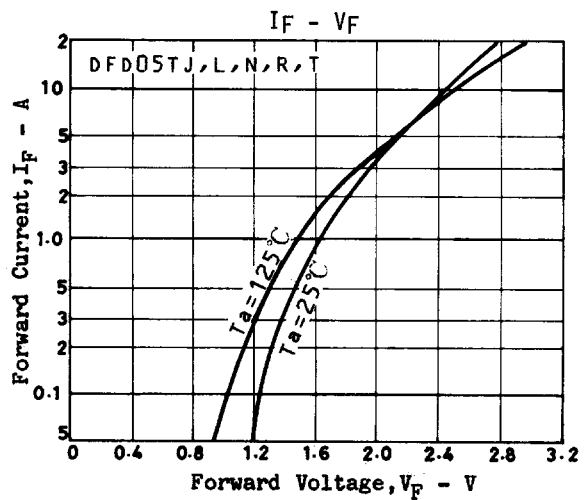
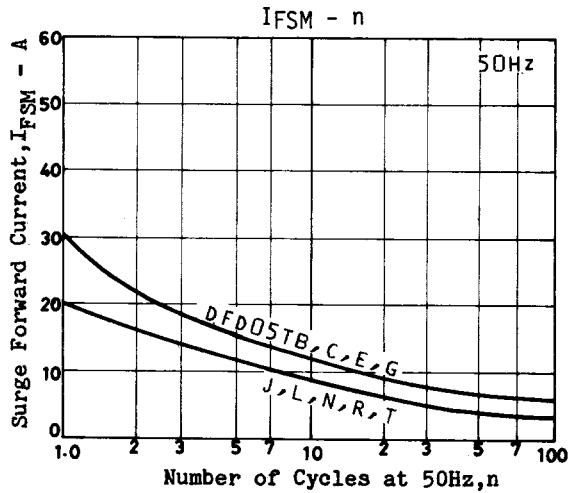
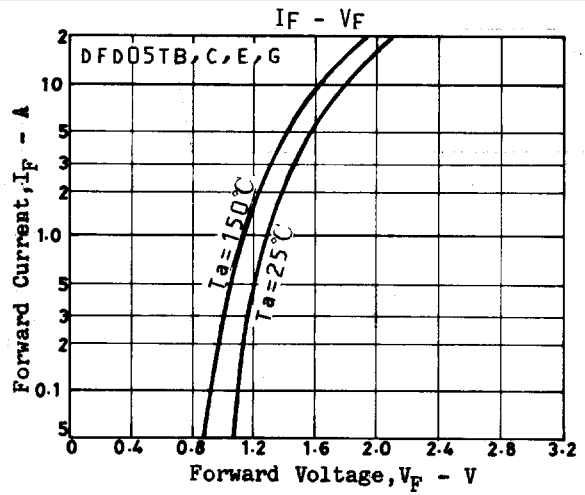
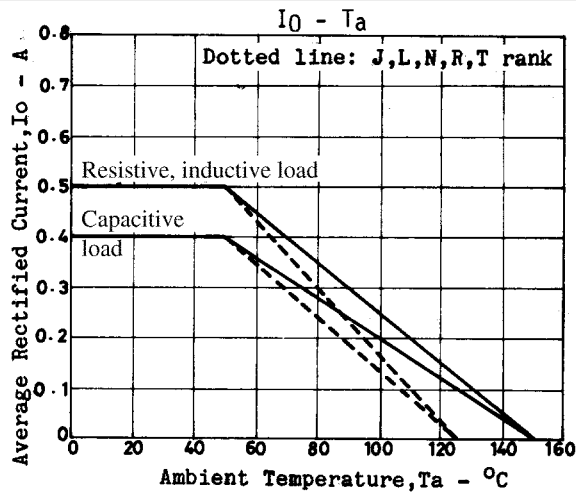
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

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	$\mu\text{A}$
Reverse Recovery Time	$t_{rr}$	$I_F=2\text{mA}$ , $V_R=15\text{V}$ (B, C, E, G)			0.15	$\mu\text{s}$
		$I_F=2\text{mA}$ , $V_R=15\text{V}$ (J, L, N, R, T)			0.3	$\mu\text{s}$

**Reverse Recovery Time Test Circuit**Unit (resistance: $\Omega$ , capacitance:F)

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