• C1.0 pF (MAX) @ V _R = 0, f = 1.0 MHz (FD 700) PACKAGES • t _{rr} 700 ps (MAX) @ I _f = I _r = 10 mA, R _L = 100 Ω (FD 700) FD700 • CONTROLLED FORWARD CONDUCTANCE FD777 ABSOLUTE MAX(MUM PATINGS (Note 1) FDLL700		RCH				FD70 FD77 Ultra F	7/FC)LL7	77	
				· · · · · · · · · · · · · · · · · · ·				-=	1-03	-09
Storage Temperature Range -65°C to +200°C -65°C to +200°C Max Junction Operating Temperature +175°C +175°C Lead Temperature +260°C +260°C Power Dissipation +260°C +260°C Maximum Total Dissipation at 25°C -65°C to +200°C SOT package, an equivalent is availab Maximum Total Dissipation at 25°C -65°C to +200°C 1.67 mW/°C Maximum Voltages and Currents 250 mW 250 mW WIV Working Inverse Voltage 20 V 8.0 V Vio Average Rectified Current 50 mA 50 mA Viv Working Inverse Voltage 20 V 8.0 V Vio Average Rectified Current 150 mA 150 mA If (surge) Peak Forward Surge Current 150 mA 150 mA Pulse Width = 1.0 s 250 mA 250 mA 250 mA SYMBOL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted) EEECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted) Vir Forward Voltage 0.89 1.10 0.89 1.35 V Ip = 50 mA	• t _{rr} , • CONT	700 ps (M ROLLED F	$ AX\rangle @ I_f = I_f = 10 mA, R_L = FORWARD CONDUCTANCE$	D 700) 100 Ω (FD 70	0)	-		FI - FI - FI	D700 D777 DLL700	DO-7 DO-7 LL-34 LL-34
WIV Working Inverse Voltage 20 V 8.0 V IQ Average Rectified Current 50 mA 50 mA IF Forward Current Steady State dc 150 mA 150 mA IF Recurrent Peak Forward Current 150 mA 150 mA If Recurrent Peak Forward Surge Current 150 mA 150 mA If (surge) Peak Forward Surge Current 250 mA 250 mA Pulse Width = 1.0 s 250 mA 250 mA 250 mA ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted) SYMBOL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted) VF Forward Voltage 0.89 1.10 0.89 1.35 V IF = 50 mA VF Forward Voltage 0.89 1.10 0.89 1.35 V IF = 50 mA	St Ma Le Pow Ma	orage Ten ax Junctio ad Tempe er Dissipa aximum To Ambient near Derat	nperature Range n Operating Temperature erature ation otal Dissipation at 25°C ting Factor (from 25°C)	65°C to + + + 2	-200°C -175°C -260°C		+200°C +175°C +260°C 250 mW	lf ye SOT equi	⁻ package, ivalent is a	an electica available. Se
SYMBOL CHARACTERISTIC FD700 FD777 UNITS TEST CONDITIONS VF Forward Voltage 0.89 1.10 0.89 1.35 V IF = 50 mA 0.81 0.95 0.81 1.00 V IF = 20 mA	V 1(1) 1	VIV C E	Working Inverse Voltage Average Rectified Currer Forward Current Steady Recurrent Peak Forward Peak Forward Surge Cur	nt State dc Current rent	50 mA 150 mA 150 mA		50 mA 150 mA 150 mA	, ,	: ···	
SYMBOL CHARACTERISTIC MIN MAX MIN MAX UNITS TEST CONDITIONS VF Forward Voltage 0.89 1.10 0.89 1.35 V IF = 50 mA 0.81 0.95 0.81 1.00 V IF = 20 mA	ELECTRI	CAL CHAR	NACTERISTICS (25°C Ambien			T				
0.81 0.95 0.81 1.00 V IF = 20 mA			CHARACTERISTIC		· • -			UNITS		DITIONS
0.64 0.74 0.64 0.79 V IF = 1.0 mA 0.52 0.61 0.52 0.64 V IF = 0.1 mA 0.42 0.50 0.42 0.53 V IF = 0.01 mA	SYMB	I			1.10	0.89	1.35 1.00	v	l <mark>⊨</mark> ≕ 20 mA	
BV Breakdown Voltage 30 15 V I _R = 5.0 μA	·	Fo	orward Voltage	0.76 0.64 0.52	0.88 0.74 0.61	0.76 0.64 0.52	0.79 0.64	V V	lF = 1.0 mA lF = 0.1 mA	

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t_{rr}

NOTES: 1. The maximum ratings are limiting values above which life or satisfactory performance may be impaired. 2. Measured as suggested by S. M. Krakauer, IRE Proceedings, Volume 60, July 1962, pp. 1674 - 1675. 3. Recovery to 0.1 lp. 4. For product family characteristic curves, refer to Chapter 4, D3.

Capacitance

Minority Carrier Lifetime

Reverse Recovery Time (Note 3)

3-55 - - •

450

700

1.0

450

750

1.3

, ps

ps

pF

(see Note 2)

 $I_f = I_r = 10 \text{ mA}, \text{R}_L = 100 \Omega$

 $V_{R} = 0, f = 1.0 \text{ MHz}$

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