



THE DATASHEET OF FZT2222A



FZT2222A

SOT223 NPN SILICON PLANAR SWITCHING TRANSISTOR

ISSUE 3 - OCTOBER 1995

FEATURES

- * 40 Volt V_{CE}
- * Fast switching

COMPLEMENTARY TYPE - FZT290
PARTMARKING DETAIL - FZT2222

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL
Collector-Base Voltage	$V_{(BR)CBO}$
Collector-Emitter Voltage	$V_{(BR)CEO}$
Emitter-Base Voltage	$V_{(BR)EBO}$
Continuous Collector Current	I_{CBO}
Power Dissipation at $T_{amb}=25^{\circ}C$	I_{EBO}
Operating and Storage Temperature Range	I_{CEX}

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL
Collector-Base Breakdown Voltage	$V_{CE(sat)}$
Collector-Emitter Breakdown Voltage	$V_{BE(sat)}$
Emitter-Base Breakdown Voltage	$V_{BE(sat)}$
Collector Cut-Off Current	I_{CBO}
Emitter Cut-Off Current	I_{EBO}
Collector-Emitter Cut-Off Current	I_{CEX}
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$
Static Forward Current Transfer Ratio	h_{FE}

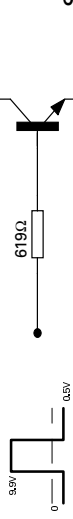
*Measured under pulsed conditions. Pulse Spice parameter data is available upon request.

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

PARAMETER	SYMBOL	VALUE		UNIT	CONDITIONS
		MIN.	MAX.		
Transition Frequency	f_T	300		MHz	$I_C=20mA, V_{CE}=20V, f=100MHz$
Output Capacitance	C_{obo}	8		pF	$V_{CB}=10V, I_E=0, f=140KHz$
Input Capacitance	C_{ibo}	25		pF	$V_{EB}=0.5V, I_C=0, f=140KHz$
Delay Time	t_d	10		ns	$V_{CE}=30V, V_{BE(on)}=0.5V, I_C=150mA, I_B=15mA$ (See Delay Test Circuit)
Rise Time	t_r	25		ns	
Storage Time	t_s	225		ns	$V_{CE}=30V, I_C=150mA, I_B=15mA$ (See Storage Test Circuit)
Fall Time	t_f	60		ns	

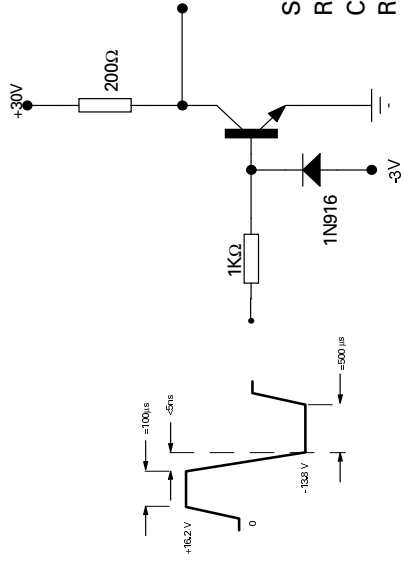
DELAY AND RISE - TEST CIRCUIT

Generator rise time <2ns
Pulse width (t₁)<200ns
Duty cycle = 2%



Scope:
 $R_{in} > 100\ k\Omega$
 $C_{in} < 12\ pF$
Rise Time < 5 ns

STORAGE TIME AND FALL TIME - TEST CIRCUIT



Scope:
 $R_{in} > 100\ k\Omega$
 $C_{in} < 12\ pF$
Rise Time < 5 ns

Duty cycle = 2%

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Emitter Cut-Off Current	
Collector-Emitter Cut-Off Current	
Collector-Emitter Saturation Voltage	
Base-Emitter Saturation Voltage	
Static Forward Current Transfer Ratio	

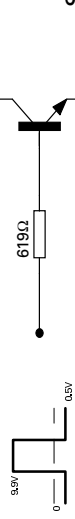
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Fall Time	t_f	60		ns	

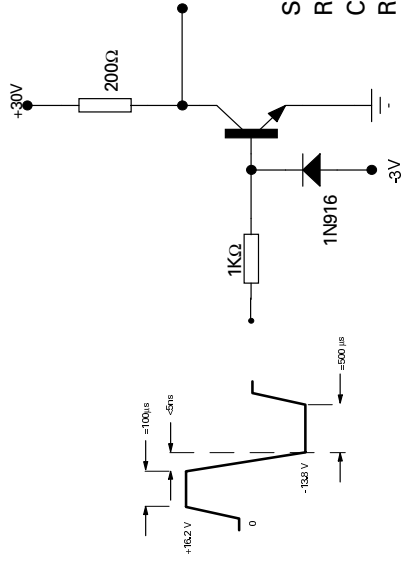
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STORAGE TIME AND FALL TIME - TEST CIRCUIT





Scope:
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Duty cycle = 2%

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