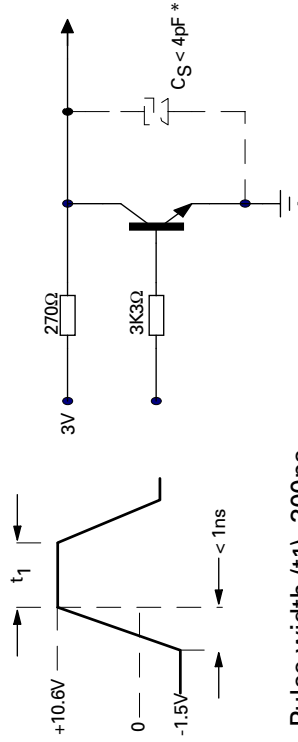


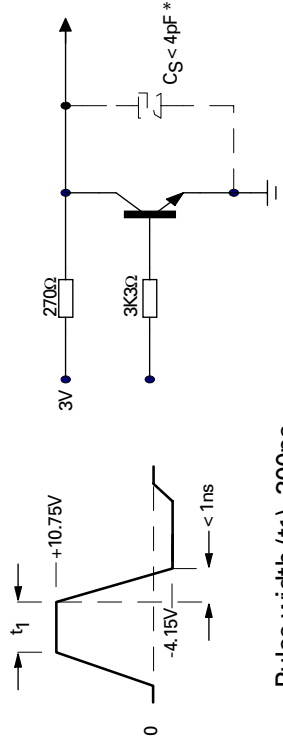
FMIMT2369 FMIMT2369A

TON CIRCUIT



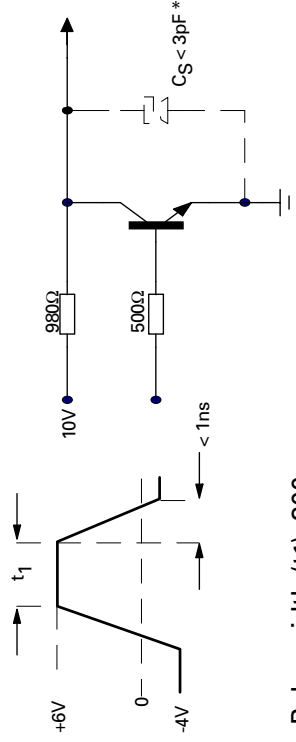
Pulse width (t1)=300ns
Duty cycle = 2%

TOFF CIRCUIT



Pulse width (t1)=300ns
Duty cycle = 2%

STORAGE TEST CIRCUIT



Pulse width (t1)=300ns
Duty cycle = 2%

* Total shunt capacitance of test jig and connectors
3-69

SOT23 NPN SILICON PLANAR HIGH SPEED SWITCHING TRANSISTORS

ISSUE 3 – AUGUST 1995

APPLICATIONS

These devices are suitable for use in high speed, low current switching applications

PARTMARKING DETAILS

FMIMT2369 - 1J
FMIMT2369R - 9R
FMIMTA2369A - P5
FMIMTA2369AR - 9A

ABSOLUTE MAXIMUM RATINGS.

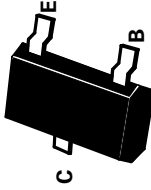
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CES}	40	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	4.5	V
Continuous Collector Current	I_C	200	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	330	mW
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	FMIMT2369		UNIT	CONDITIONS.
		MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	40	40	V	$I_C=10\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	15	15	V	$I_C=10mA, I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	4.5	4.5	V	$I_E=10\mu A, I_C=0$
Collector Cut-Off Current	I_{CBO}		400	nA	$V_{CE}=20V, I_E=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.25	0.25	V	$I_C=10mA, I_B=1mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	0.7	0.85	V	$I_C=10mA, I_B=1mA^*$
Static Forward Current Transfer Ratio	h_{FE}	40 20	120 20		$I_C=10mA, V_{CE}=1V, T_{amb}=55^{\circ}C^*$ $I_C=100mA, V_{CE}=1V^*$ $I_C=100mA, V_{CE}=2V^*$
Output Capacitance	C_{ob0}		4	pF	$V_{CE}=5V, I_E=0, f=140KHz$
Turn-on Time	t_{on}	12	12	ns	$V_{CC}=3V, V_{BE(off)}=1.5V, I_C=10mA, I_B=3mA$ (See t_{ON} circuit)
Turn-off Time	t_{off}	18	18	ns	$V_{CC}=3V, I_C=10mA, I_B=3mA, I_BZ=1.5mA$ (See t_{OFF} circuit)
Storage Time	t_s	13	13	ns	$I_C=I_B=I_BZ=10mA$ (See Storage test circuit)

*Measured under pulsed conditions. Pulse width=300us. Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

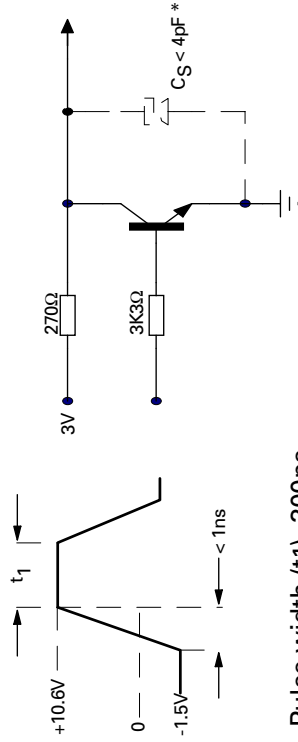
FMIMT2369 FMIMT2369A



SOT23

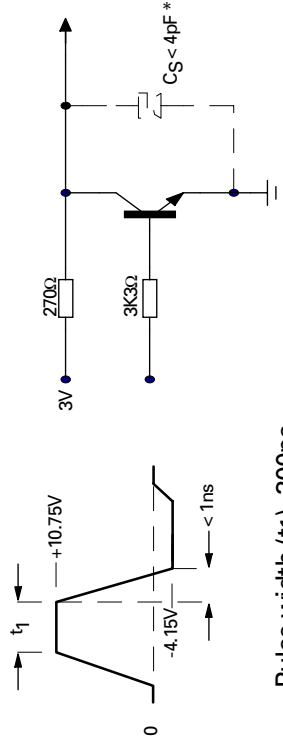
FMIMT2369 FMIMT2369A

TON CIRCUIT



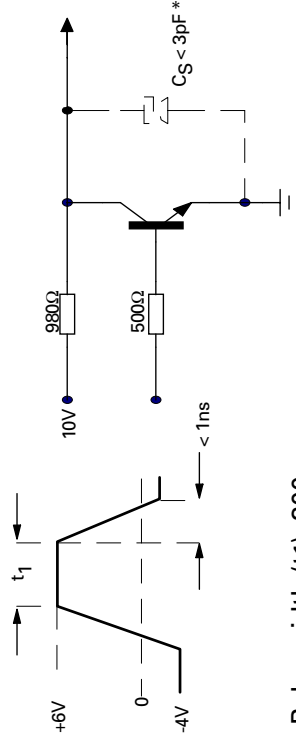
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TOFF CIRCUIT



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STORAGE TEST CIRCUIT



Pulse width (t1)=300ns
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ISSUE 3 – AUGUST 1995

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FMIMT2369R - 9R
FMIMTA2369A - P5
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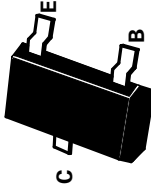
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Storage Time	t_s	13	13	ns	$I_C=I_B=I_{BZ}=10mA$ (See Storage test circuit)

*Measured under pulsed conditions. Pulse width=300us. Duty cycle $\leq 2\%$
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FMIMT2369 FMIMT2369A



SOT23