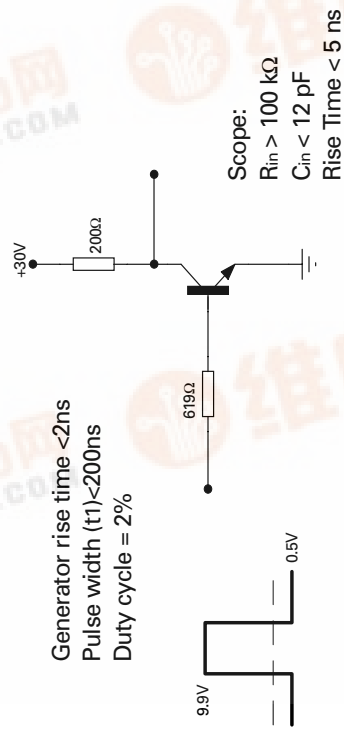


ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

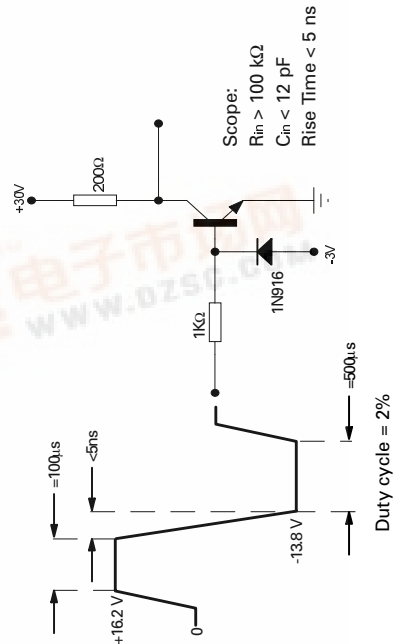
PARAMETER	SYMBOL	FMMT2222		FMMT2222A		UNIT	CONDITIONS
		MIN.	MAX.	MIN.	MAX.		
Transition Frequency	f _T	250	300	300	300	MHz	I _C =20mA, V _{CE} =20V f=100MHz
Output Capacitance	C _{obo}	8	8	8	8	pF	V _{CE} =10V, I _E =0, f=140KHz
Input Capacitance	C _{ibo}	30	30	25	25	pF	V _{EF} =0.5V, I _C =0 f=140KHz
Delay Time	t _d	10	10	10	10	ns	V _{CC} =30V, V _{BE(off)} =0.5V I _C =150mA, I _B =15mA (See Delay Test Circuit)
Rise Time	t _r	25	25	25	25	ns	
Storage Time	t _s	225	225	225	225	ns	V _{CC} =30V, I _C =150mA I _B =I _C =15mA (See Storage Test Circuit)
Fall Time	t _f	60	60	60	60	ns	

DELAY AND RISE – TEST CIRCUIT



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

STORAGE TIME AND FALL TIME – TEST CIRCUIT



FEATURES

- * Fast switching
- PARTMARKING DETAILS
FMMT2222 – 1BZ FMMT2222A – 1P
FMMT2222R – 2P FMMT2222AR – 3P
- COMPLEMENTARY TYPES
FMMT2222 – FMMT2907
FMMT2222A – FMMT2907A

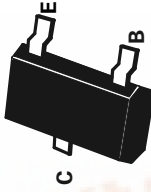
ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMT2222	FMMT2222A	UNIT
Collector-Base Voltage	V _{CBO}	60	75	V
Collector-Emitter Voltage	V _{CEO}	30	40	V
Emitter-Base Voltage	V _{EBO}	5	6	V
Continuous Collector Current	I _C	600	600	mA
Power Dissipation at T _{amb} =25°C	P _{tot}	330	330	mW
Operating and Storage Temperature Range	T _j ; T _{stg}	-55 to +150		°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	FMMT2222		FMMT2222A		UNIT	CONDITIONS
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	V _{(BR)CBO}	60	75	75	75	V	I _C =10μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	30	40	40	40	V	I _C =10mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5	6	6	6	V	I _E =10μA, I _C =0
Collector Cut-Off Current	I _{CBO}	10	10	10	10	nA	V _{CE} =50V, I _E =0 V _{CE} =60V, I _E =0
Emitter Cut-Off Current	I _{EBO}	10	10	10	10	nA	V _{CE} =50V, I _E =0 V _{CE} =60V, I _E =0, T _{amb} =150°C V _{CE} =60V, I _E =0, T _{amb} =150°C
Collector-Emitter Cut-Off Current	I _{CEX}	10	10	10	10	nA	V _{CE} =60V, V _{EB(off)} =3V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	0.3	1.0	0.3	1.0	V	I _C =150mA, I _B =15mA* I _C =500mA, I _B =50mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}	0.6	2.0	0.6	2.0	V	I _C =150mA, I _B =15mA* I _C =500mA, I _B =50mA*
Static Forward Current Transfer Ratio	h _{FE}	35	50	35	50		I _C =0.1mA, V _{CE} =10V* I _C =1mA, V _{CE} =10V I _C =10mA, V _{CE} =10V* I _C =10mA, V _{CE} =10V, T _{amb} =55°C I _C =150mA, V _{CE} =10V* I _C =150mA, V _{CE} =10V* I _C =150mA, V _{CE} =1V* I _C =500mA, V _{CE} =10V*

*Measured under pulsed conditions. Pulse width=300μs, Duty cycle ≤ 2%. Spice parameter data is available upon request for this device



FMMT2222 FMMT2222A

SOT23 NPN SILICON PLANAR SWITCHING TRANSISTORS

FMMT2222 FMMT2222A

ISSUE 3 – FEBRUARY 1996

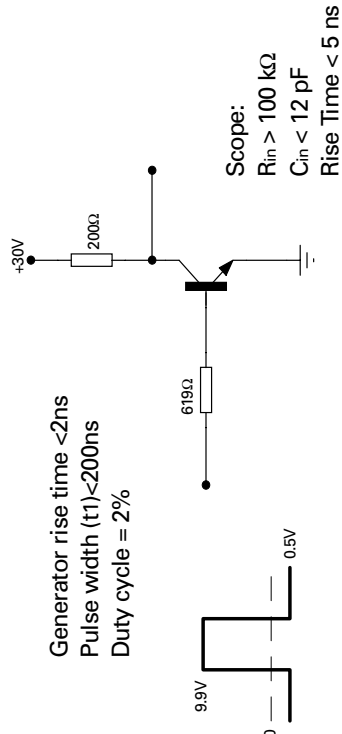
FEATURES

- * Fast switching
- PARTMARKING DETAILS
FMMT2222 – 1BZ FMMT2222A – 1P
FMMT2222R – 2P FMMT2222AR – 3P
- COMPLEMENTARY TYPES
FMMT2222 – FMMT2907
FMMT2222A – FMMT2907A

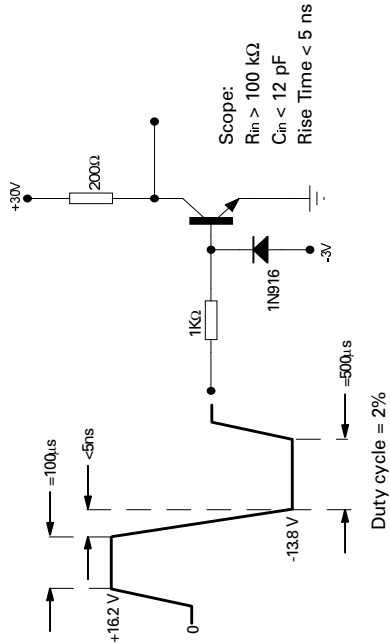
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	FMMT2222		FMMT2222A		UNIT	CONDITIONS
		MIN.	MAX.	MIN.	MAX.		
Transition Frequency	f _T	250	300	300	300	MHz	I _C =20mA, V _{CE} =20V f _i =100MHz
Output Capacitance	C _{obo}		8	8	8	pF	V _{CE} =10V, I _E =0, f=140KHz
Input Capacitance	C _{ibo}		30	25	25	pF	V _{EB} =0.5V, I _C =0 f=140KHz
Delay Time	t _d		10	10	10	ns	V _{CC} =30V, V _{BE(off)} =0.5V I _C =150mA, I _B =15mA (See Delay Test Circuit)
Rise Time	t _r		25	25	25	ns	
Storage Time	t _s		225	225	225	ns	V _{CC} =30V, I _C =150mA I _B =I _C =15mA (See Storage Test Circuit)
Fall Time	t _f		60	60	60	ns	

DELAY AND RISE – TEST CIRCUIT



STORAGE TIME AND FALL TIME – TEST CIRCUIT



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMT2222	FMMT2222A	UNIT
Collector-Base Voltage	V _{CBO}	60	75	V
Collector-Emitter Voltage	V _{CEO}	30	40	V
Emitter-Base Voltage	V _{EBO}	5	6	V
Continuous Collector Current	I _C		600	mA
Power Dissipation at T _{amb} =25°C	P _{tot}		330	mW
Operating and Storage Temperature Range	T _j ; T _{stg}	-55 to +150		°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	FMMT2222		FMMT2222A		UNIT	CONDITIONS
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	V _{(BR)CBO}	60		75		V	I _C =10μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	30		40		V	I _C =10mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5		6		V	I _E =10μA, I _C =0
Collector Cut-Off Current	I _{CBO}		10		10	nA	V _{CE} =50V, I _E =0 V _{CE} =60V, I _E =0
Emitter Cut-Off Current	I _{EBO}		10		10	nA	V _{CE} =50V, I _E =0 V _{CE} =60V, I _E =0, T _{amb} =150°C V _{CE} =60V, I _E =0, T _{amb} =150°C
Collector-Emitter Cut-Off Current	I _{CEX}		10		10	nA	V _{CE} =60V, V _{EB(off)} =3V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	0.3	1.0	0.3	1.0	V	I _C =150mA, I _B =15mA* I _C =500mA, I _B =50mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}	0.6	2.0	0.6	2.0	V	I _C =150mA, I _B =15mA* I _C =500mA, I _B =50mA*
Static Forward Current Transfer Ratio	h _{FE}	35	50	35	50		I _C =0.1mA, V _{CE} =10V* I _C =1mA, V _{CE} =10V I _C =10mA, V _{CE} =10V* I _C =10mA, V _{CE} =10V, T _{amb} =55°C I _C =150mA, V _{CE} =10V* I _C =150mA, V _{CE} =10V* I _C =150mA, V _{CE} =1V* I _C =500mA, V _{CE} =10V*
		30	30	30	30		I _C =150mA, V _{CE} =10V*

*Measured under pulsed conditions. Pulse width=300μs, Duty cycle ≤ 2%. Spice parameter data is available upon request for this device

