MPS2222 NPN EPITAXIAL SILICON TRANSISTOR

GENERAL PURPOSE TRANSISTOR

- **Collector-Emitter Voltage: V_{CEO}=30V**
- **Collector Dissipation: P_C (max)=625mW**

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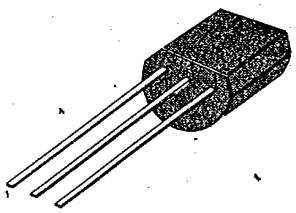

1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	600	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature	Tstg	−55~150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=10μA, I_E=0	60			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA, I_B=0	30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA, I_C=0	5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, I_E=0			10	nA
DC Current Gain	h_{FE}	I_C=0.1mA, V_{CE}=10V	35			
		I_C=1mA, V_{CE}=10V	50			
		I_C=10mA, V_{CE}=10V	75			
		*I_C=150mA, V_{CE}=10V	100		300	
		*I_C=500mA, V_{CE}=10V	30			
*Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=150mA, I_B=15mA			0.4	V
		I_C=500mA, I_B=50mA			1.6	V
*Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C=150mA, I_B=15mA			1.3	V
		I_C=500mA, I_B=50mA			2.6	V
Output Capacitance	Cob	V_{CB}=10V, I_E=0, f=1MHz			8	pF
Current Gain Bandwidth Product	f_T	I_C=20mA, V_{CE}=20V f=100MHz	250			MHz
Turn On Time	ton	V_{CC}=30V, V_{BE}=0.5V I_C=150mA, I_{B1}=15mA			35	ns
Turn Off Time	toff	V_{CC}=30V, I_C=150mA I_{B1}=I_{B2}=15mA			285	ns

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%
Also available as a PN2222

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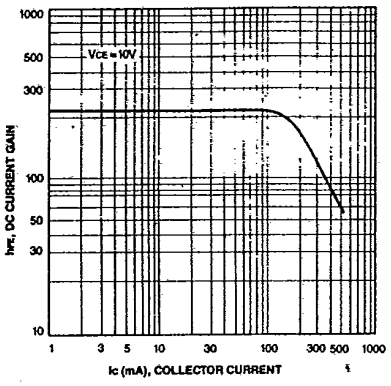
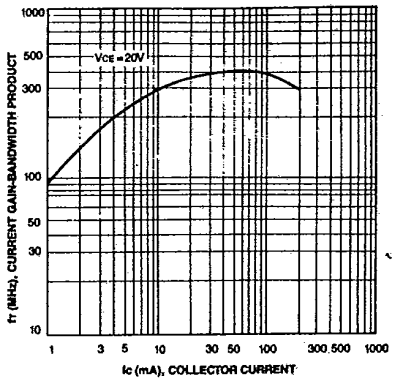
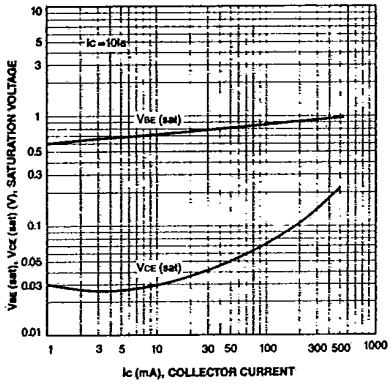
DC CURRENT GAIN



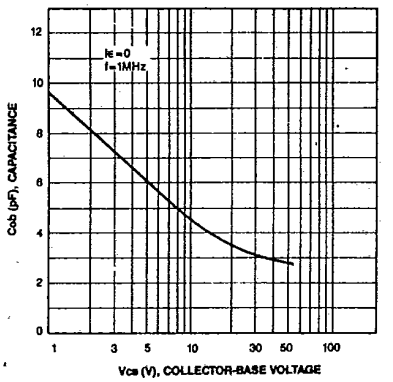
CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE



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