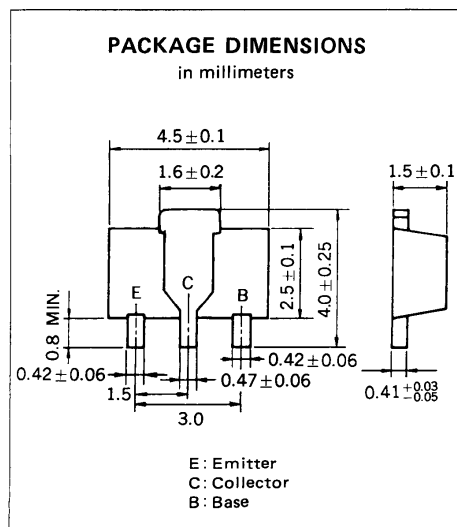


NPN SILICON EPITAXIAL TRANSISTOR

POWER MINI MOLD

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**FEATURES**

- High h_{FE} $h_{FE} = 800$ to 3200

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CB0}	50	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	15	V
Collector Current (DC)	$I_C(\text{DC})$	300	mA
Collector Current (Pulse)*	$I_C(\text{pulse})$	500	mA
Total Power Dissipation**	P_T	2.0	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

*PW ≤ 10 ms, Duty Cycle ≤ 50 %

When mounted on ceramic substrate of 16 cm² x 0.7 mmELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)**

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CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CB0}			100	nA	$V_{CB} = 50\text{ V}, I_E = 0$
Emitter Cutoff Current	I_{EB0}			100	nA	$V_{EB} = 10\text{ V}, I_C = 0$
DC Current Gain	h_{FE1}^{***}	800	1500	3200		$V_{CE} = 5.0\text{ V}, I_C = 100\text{ mA}$
DC Current Gain	h_{FE2}^{***}	640				$V_{CE} = 5.0\text{ V}, I_C = 300\text{ mA}$
Collector Saturation Voltage	$V_{CE(\text{sat})}^{***}$		0.12	0.3	V	$I_C = 100\text{ mA}, I_B = 1.0\text{ mA}$
Base Saturation Voltage	$V_{BE(\text{sat})}^{***}$		0.7	1.2	V	$I_C = 100\text{ mA}, I_B = 1.0\text{ mA}$
Gain Bandwidth Product	f_T	150	220		MHz	$V_{CE} = 5.0\text{ V}, I_E = -50\text{ mA}$
Output Capacitance	C_{ob}		8.0		pF	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$
Turn-on Time	t_{on}		0.15		μs	$V_{CC} = 10\text{ V}, V_{BE(\text{off})} \div -2.7\text{ V}$
Turn-off Time	t_{off}		1.1		μs	$I_C = 200\text{ mA}, I_{B1} = -I_{B2} = 4.0\text{ mA}$

***Pulsed: PW ≤ 350 μs, Duty Cycle ≤ 2 %

 h_{FE} Classification

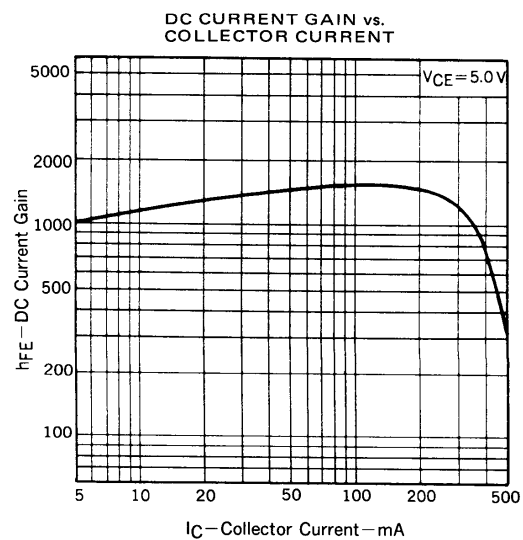
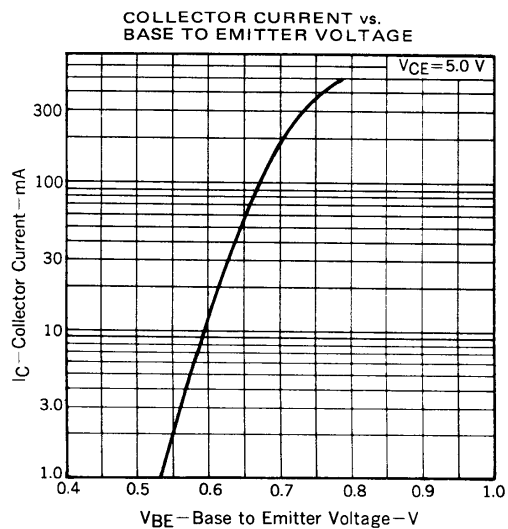
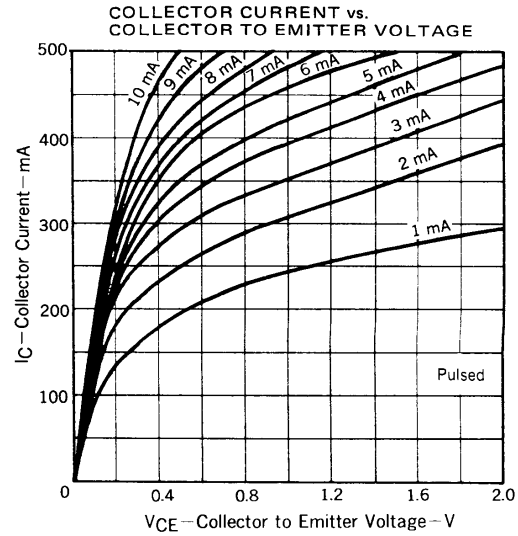
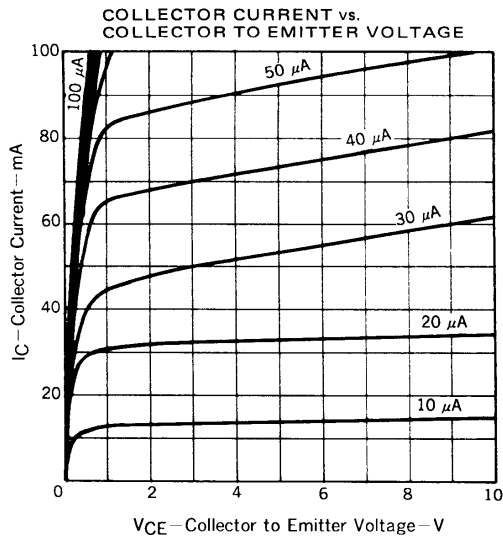
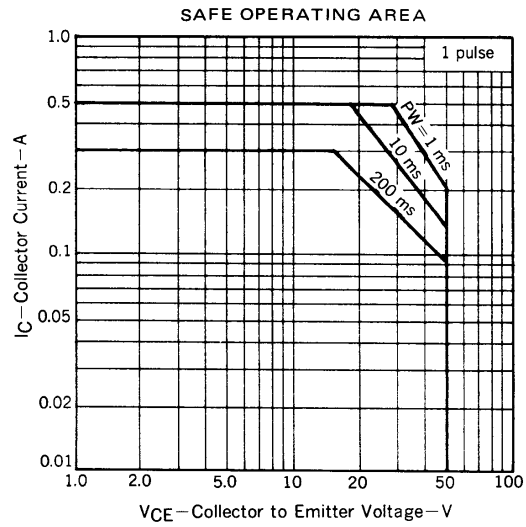
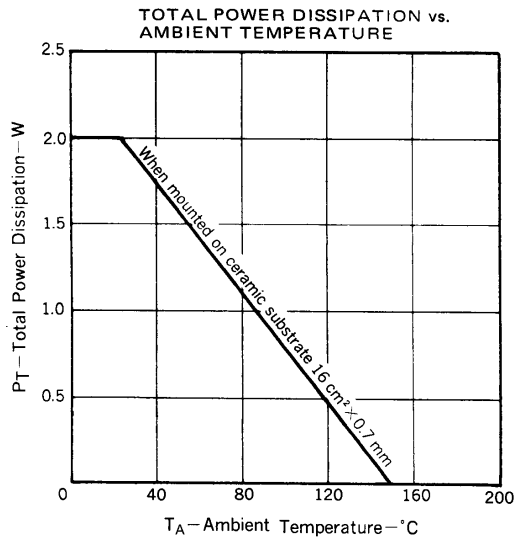
MARKING	TM	TL	TK
h_{FEI}	800 to 1600	1200 to 2400	2000 to 3200

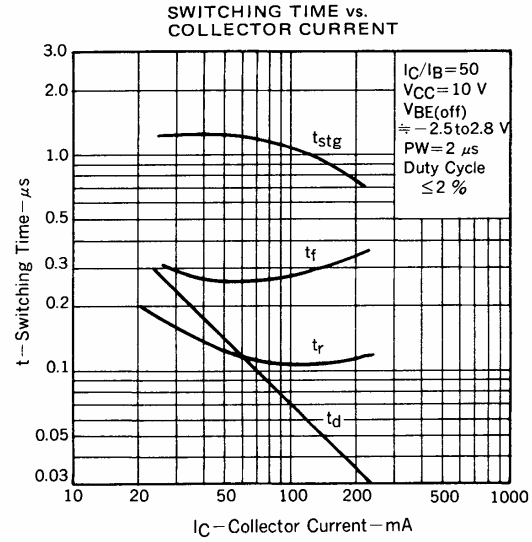
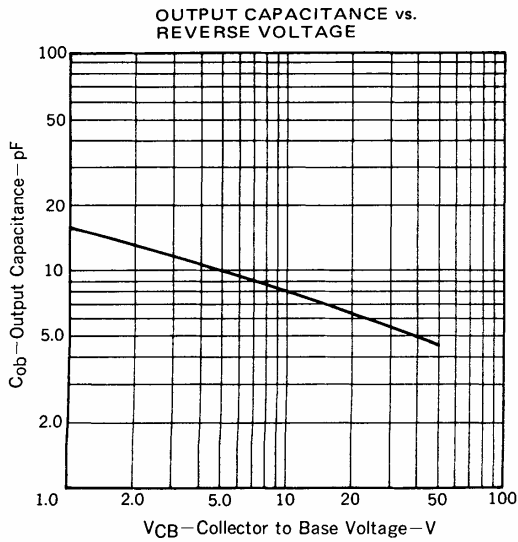
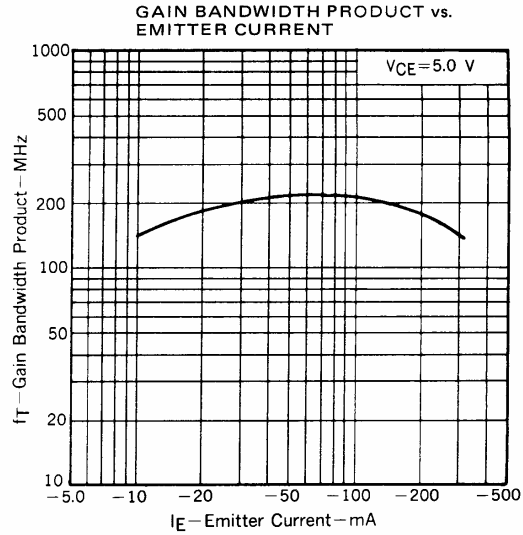
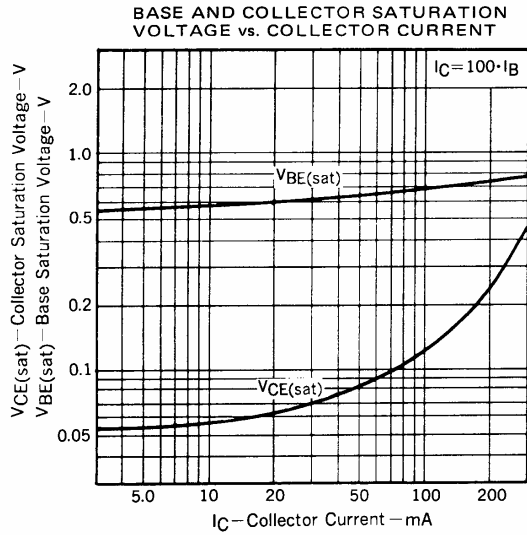
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TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

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