

## MMBT5550

## NPN EPITAXIAL SILICON TRANSISTOR

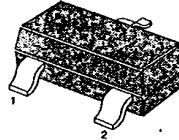
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## HIGH VOLTAGE TRANSISTOR

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	160	V
Collector-Emitter Voltage	$V_{CE0}$	140	V
Emitter-Base Voltage	$V_{EB0}$	6	V
Collector Current	$I_C$	600	mA
Collector Dissipation	$P_C$	350	mW
Storage Temperature	$T_{stg}$	150	$^\circ\text{C}$

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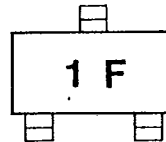


1. Base 2. Emitter 3. Collector

ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	160		V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1\text{mA}, I_B = 0$	140		V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	6		V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 100\text{V}, I_E = 0$		100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$		50	nA
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 1.0\text{mA}$	60		
		$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	60	250	
		$V_{CE} = 5\text{V}, I_C = 50\text{mA}$	20		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		0.15	V
		$I_C = 50\text{mA}, I_B = 5\text{mA}$		0.25	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		1.0	V
		$I_C = 50\text{mA}, I_B = 5\text{mA}$		1.2	V
Current Gain-Bandwidth Product	$f_T$	$I_C = 10\text{mA}, V_{CE} = 10\text{V}$ $f = 100\text{MHz}$	100	300	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0$ $f = 1.0\text{MHz}$		6.0	pF

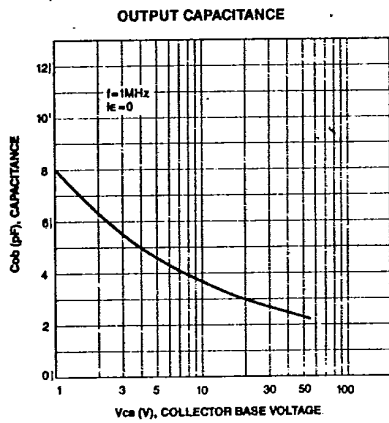
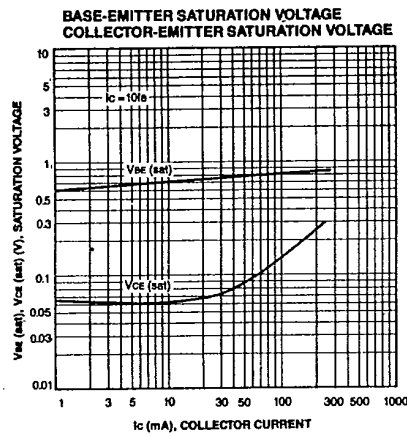
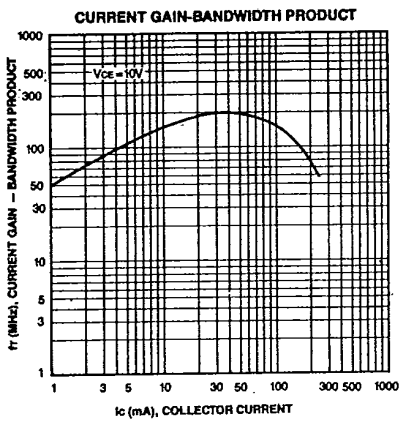
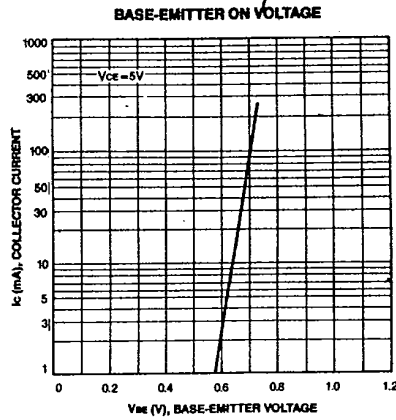
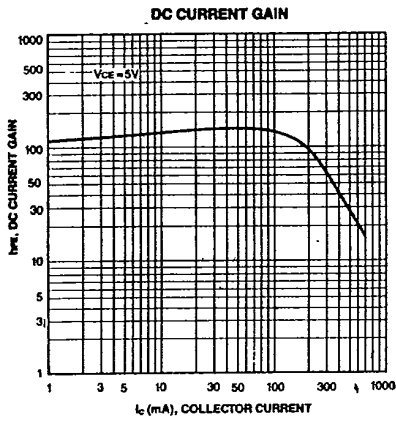
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