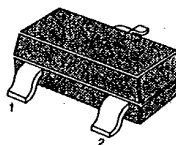


MMBT6427**NPN EPITAXIAL SILICON TRANSISTOR****DARLINGTON TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	40	V
Collector-Emitter Voltage	V_{CE0}	40	V
Emitter-Base Voltage	V_{EB0}	12	V
Collector Current	I_C	500	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	T_{stg}	150	$^\circ\text{C}$

SOT-23

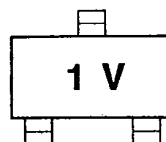


1. Base 2. Emitter 3. Collector

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

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	40		V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10\text{mA}$, $I_B = 0$	40		V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 10\mu\text{A}$, $I_C = 0$	12		V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_E = 0$		50	nA
Collector Cutoff Current	I_{CEO}	$V_{CE} = 25\text{V}$, $I_B = 0$		1	μA
Emitter Cutoff Current	I_{EBO}	$V_{BE} = 10\text{V}$, $I_C = 0$		50	nA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}$, $I_C = 10\text{mA}$	10,000	100,000	
		$V_{CE} = 5\text{V}$, $I_C = 100\text{mA}$	20,000	200,000	
		$V_{CE} = 5\text{V}$, $I_C = 500\text{mA}$	14,000	140,000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}$, $I_B = 0.5\text{mA}$		1.2	V
		$I_C = 500\text{mA}$, $I_B = 0.5\text{mA}$		1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$, $I_B = 0.5\text{mA}$		2.0	V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_C = 50\text{mA}$, $V_{CE} = 5\text{V}$		1.75	V
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$		7	pF
		$f = 1\text{MHz}$			
Noise Figure	NF	$I_C = 1\text{mA}$, $V_{CE} = 5\text{V}$		10	dB
		$R_S = 100\text{K}\Omega$			
		$f = 1\text{kHz to } 15.7\text{kHz}$			

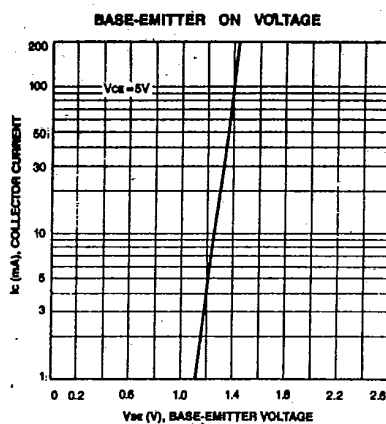
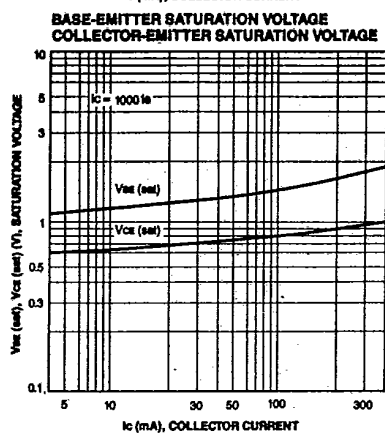
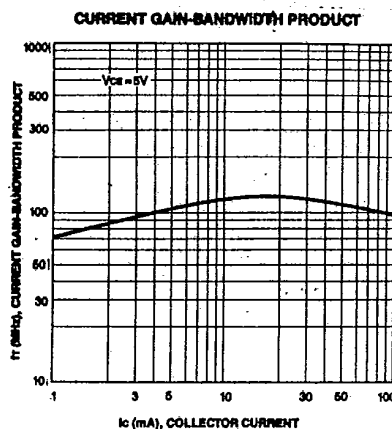
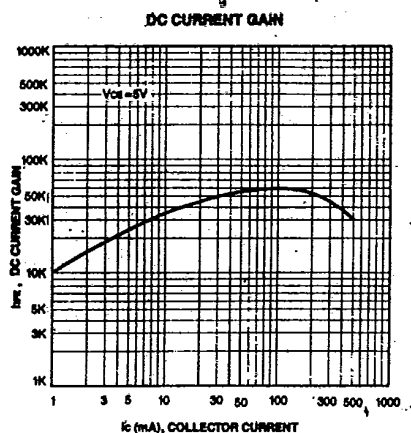
Marking



MMBT6427

NPN EPITAXIAL SILICON TRANSISTOR

T-29-29



3

