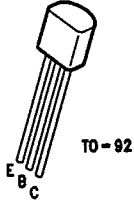


2N6427/MMBT6427/MPQ6427



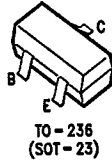
T-33-29

2N6427



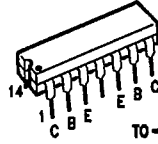
TL/G/10100-1

MMBT6427



TL/G/10100-5

MPQ6427*



TL/G/10100-7

NPN Darlington Transistor

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Min	Typ	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage, (Note 1) ($I_C = 10 \text{ mAdc}, I_B = 0$)	40			Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C = 100 \mu\text{Adc}, I_E = 0$)	40			Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E = 10 \mu\text{Adc}, I_C = 0$)	12			Vdc
I_{CEO}	Collector Cutoff Current ($V_{CE} = 25 \text{ Vdc}, I_B = 0$)			1.0	μAdc
I_{CBO}	Collector Cutoff Current ($V_{CB} = 30 \text{ Vdc}, I_E = 0$)			50	nAdc
I_{EBO}	Emitter Cutoff Current ($V_{EB} = 10 \text{ Vdc}, I_C = 0$)			50	nAdc
ON CHARACTERISTICS					
h_{FE}	DC Current Gain, (Note 1) ($I_C = 10 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$) ($I_C = 100 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$) ($I_C = 500 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$)	10,000 20,000 14,000		100,000 200,000 140,000	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = 50 \text{ mAdc}, I_B = 0.5 \text{ mAdc}$) ($I_C = 500 \text{ mAdc}, I_B = 0.5 \text{ mAdc}$)		0.71 0.9	1.2 1.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C = 500 \text{ mAdc}, I_B = 0.5 \text{ mAdc}$)		1.52	2.0	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage ($I_C = 50 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$)		1.24	1.75	Vdc

*16-SOIC version also available. Contact factory.

NPN Darlington Transistor (Continued)

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Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted (Continued)

Symbol	Parameter	Min	Typ	Max	Units
SMALL-SIGNAL CHARACTERISTICS					
C_{obo}	Output Capacitance ($V_{CB} = 10\text{ Vdc}, I_E = 0, f = 1.0\text{ MHz}$)		5.4	7.0	pF
C_{ibo}	Input Capacitance ($V_{BE} = 1.0\text{ Vdc}, I_C = 0, f = 1.0\text{ MHz}$)		10	15	pF

Note 1: Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

Note 2: For characteristics curves, see Process 05.

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