

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	40	Vdc
Collector-Base Voltage	V _{CBO}	40	Vdc
Emitter-Base Voltage	V _{EBO}	12	Vdc
Collector Current — Continuous	I _C	500	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, T _A = 25°C Derate above 25°C	P _D	350 2.8	mW mW/°C
Storage Temperature	T _{stg}	150	°C
*Thermal Resistance Junction to Ambient	R _{θJA}	357	°C/W

*Package mounted on 99.5% alumina 10 x 8 x 0.6 mm.

MMBT6427

**CASE 318-02/03, STYLE 6
SOT-23 (TO-236AA/AB)**

DARLINGTON TRANSISTOR

NPN SILICON

Refer to 2N6426 for graphs.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
----------------	--------	-----	-----	------

OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage (I _C = 10 mAdc, I _B = 0)	V _{(BR)CEO}	40	—	Vdc
Collector-Base Breakdown Voltage (I _C = 100 μAdc, I _E = 0)	V _{(BR)CBO}	40	—	Vdc
Emitter-Base Breakdown Voltage (I _C = 10 μAdc, I _C = 0)	V _{(BR)EBO}	12	—	Vdc
Collector Cutoff Current (V _{CE} = 25 Vdc, I _B = 0)	I _{CEO}	—	1.0	μAdc
Collector Cutoff Current (V _{CB} = 30 Vdc, I _E = 0)	I _{CBO}	—	50	nAdc
Emitter Cutoff Current (V _{BE} = 10 Vdc, I _C = 0)	I _{EBO}	—	50	nAdc

ON CHARACTERISTICS

DC Current Gain (I _C = 10 mAdc, V _{CE} = 5.0 Vdc) (I _C = 100 mAdc, V _{CE} = 5.0 Vdc) (I _C = 500 mAdc, V _{CE} = 5.0 Vdc)	h _{FE}	10,000 20,000 14,000	100,000 200,000 140,000	—
Collector-Emitter Saturation Voltage (I _C = 50 mAdc, I _B = 0.5 mAdc) (I _C = 500 mAdc, I _B = 0.5 mAdc)	V _{CE(sat)}	— —	1.2 1.5	Vdc
Base-Emitter Saturation Voltage (I _C = 500 mAdc, I _B = 0.5 mAdc)	V _{BE(sat)}	—	2.0	Vdc
Base-Emitter On Voltage (I _C = 50 mAdc, V _{CE} = 5.0 Vdc)	V _{BE(on)}	—	1.75	Vdc

SMALL-SIGNAL CHARACTERISTICS

Output Capacitance (V _{CB} = 10 Vdc, I _E = 0, f = 1.0 MHz)	C _{obo}	—	7.0	pF
Input Capacitance (V _{BE} = 0.5, I _C = 0, f = 1.0 MHz)	C _{ibo}	—	15	pF
Current Gain — High Frequency (I _C = 10 mAdc, V _{CE} = 5.0 Vdc, f = 100 MHz)	h _{fe}	1.3	—	Vdc
Noise Figure (I _C = 1.0 mAdc, V _{CE} = 5.0 Vdc, R _S = 100 kΩ, f = 1.0 kHz to 15.7 kHz)	NF	—	10	dB