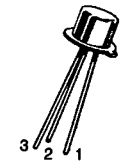
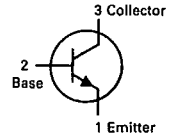
MM6427

CASE 22-03, STYLE 1
TO-18 (TO-206AA)





DARLINGTON TRANSISTOR

NPN SILICON

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	40	Vdc
Collector-Base Voltage	V_{CBO}	50	Vdc
Emitter-Base Voltage	V_{EBO}	12	Vdc
Collector Current — Continuous	I_C	300	mAdc
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	375 2.14	mW W/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	1.25 7.15	Watts W/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−65 to +200	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	140	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	467	°C/W

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage(1) (I_C = 1.0 mAdc, I_B = 0)	$V_{(BR)CEO}$	40	—	Vdc
Collector-Base Breakdown Voltage (I_C = 100 μAdc, I_E = 0)	$V_{(BR)CBO}$	50	—	Vdc
Emitter-Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0)	$V_{(BR)EBO}$	12	—	Vdc
Collector Cutoff Current (V_{CB} = 30 Vdc, I_E = 0)	I_{CBO}	—	100	nAdc
Emitter Cutoff Current (V_{BE} = 10 Vdc, I_C = 0)	I_{EBO}	—	100	nAdc
ON CHARACTERISTICS(1)				
DC Current Gain (I_C = 10 mAdc, V_{CE} = 5.0 Vdc) (I_C = 100 mAdc, V_{CE} = 5.0 Vdc)	h_{FE}	 5000 10,000	 — —	—
Collector-Emitter Saturation Voltage (I_C = 100 mAdc, I_B = 0.1 mAdc)	$V_{CE(sat)}$	—	1.5	Vdc
Base-Emitter On Voltage (I_C = 100 mAdc, V_{CE} = 5.0 Vdc)	$V_{BE(on)}$	—	2.0	Vdc
SMALL-SIGNAL CHARACTERISTICS				
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 100 kHz)	C_{obo}	—	8.0	pF
Input Capacitance (V_{BE} = 0.5 Vdc, I_C = 0, f = 100 kHz)	C_{ibo}	—	15	pF
Small-Signal Current Gain(1) (I_C = 10 mAdc, V_{CE} = 5.0 Vdc, f = 100 MHz)	h_{fe}	1.25	—	—

(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.