MM5415
MM5416

CASE 79-02, STYLE 1
TO-39 (TO-205AD)

TRANSISTOR

PNP SILICON

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MAXIMUM RATINGS

Rating	Symbol	MM5415	MM5416	Unit
Collector-Emitter Voltage	V_{CEO}	200	300	Vdc
Collector-Base Voltage	V_{CBO}	200	350	Vdc
Emitter-Base Voltage	V_{EBO}	4.0	7.0	Vdc
Base Current	I_B	0.5		Adc
Collector Current — Continuous	I_C	1.0		Adc
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	1.0 6.7		Watt W/°C
Total Power Dissipation @ T_C = 50°C Linear Derating Factor	P_D	10 0.057		Watts mW/°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	$R_{\theta JC}$	17.5	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	150	°C/W

Refer to 2N5415 for graphs.

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

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage (I_C = 10 mA, I_B = 0)	MM5415 MM5416	$V_{CEO(sus)}$	 200 300	 — —	Vdc
Collector Cutoff Current (V_{CE} = 150 Vdc, I_B = 0)	MM5415, MM5416	I_{CEO}	—	50	μAdc
Collector Cutoff Current (V_{CE} = 175 Vdc, I_E = 0) (V_{CE} = 280 Vdc, I_E = 0)	 MM5415 MM5416	I_{CBO}	 — —	 50 50	 μAdc μAdc
Emitter Cutoff Current (V_{BE} = 4.0 Vdc, I_C = 0) (V_{BE} = 7.0 Vdc, I_C = 0)	 MM5415 MM5416	I_{EBO}	 — —	 20 20	μAdc
ON CHARACTERISTICS					
DC Current Gain (I_C = 50 mAdc, V_{CE} = 10 Vdc)	MM5415 MM5416	h_{FE}	30 30	150 120	—
Collector-Emitter Saturation Voltage (I_C = 50 mAdc, I_B = 5.0 mAdc)	MM5415, MM5416	$V_{CE(sat)}$	—	2.5	Vdc
Base-Emitter On Voltage (I_C = 50 mAdc, V_{CE} = 10 V)	MM5415, MM5416	$V_{BE(on)}$	—	1.5	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product (I_C = 10 mAdc, V_{CE} = 10 Vdc, f = 5.0 MHz)		f_T	15	—	MHz
Output Capacitance (V_{CB} = 10 Vdc, f = 1.0 MHz)		C_{obo}	—	25	pF
Current Gain — High Frequency (I_C = 5.0 mAdc, V_{CE} = 10 Vdc, f = 1.0 kHz)		$\|h_{fe}\|$	25	—	—
Real Part of Input Impedance (I_C = 5.0 mAdc, V_{CE} = 10 Vdc, f = 1.0 MHz)		$Re(h_{ie})$	—	300	Ohms