MM420
MM421

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

TRANSISTOR

NPN SILICON

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Refer to 2N3439 for graphs.

MAXIMUM RATINGS

Rating	Symbol	MM420	MM421	Unit
Collector-Emitter Voltage	V_{CEO}	250	325	Vdc
Collector-Base Voltage	V_{CBO}	275	350	Vdc
Emitter-Base Voltage	V_{EBO}	6.0	6.0	Vdc
Base Current	I_B	100	100	mA
Collector Current — Continuous	I_C	100	500	mA
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	800 5.3		mW mW/°C
Total Device Dissipation @ T_A = 75°C Derate above 75°C	P_D	2.5 25		Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−65 to +175		°C

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

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage(1) (I_C = 10 mA, I_B = 0)	MM420 MM421	$V_{CEO(sus)}$	250 325	— —	Vdc
Collector-Base Breakdown Voltage (I_C = 100 μAdc)	MM420 MM421	$V_{(BR)CBO}$	275 350	— —	Vdc
Emitter-Base Breakdown Voltage (I_E = 100 μAdc)		$V_{(BR)EBO}$	6	—	Vdc
Collector Cutoff Current (V_{CE} = 250 Vdc, I_B = 0) (V_{CE} = 325 Vdc, I_B = 0)	MM420 MM421	I_{CEO}	— —	1.0 1.0	mAdc
Collector Cutoff Current (V_{BE} = 275 Vdc, I_E = 0) (V_{BE} = 350 Vdc, I_E = 0)	MM420 MM421	I_{CBO}	— —	100 100	μAdc
ON CHARACTERISTICS					
DC Current Gain (I_C = 1.0 mAdc, V_{CE} = 20 Vdc) (I_C = 10 mAdc, V_{CE} = 20 Vdc) (I_C = 30 mAdc, V_{CE} = 20 Vdc)		h_{FE}	15 25 25	— — 250	—
Collector-Emitter Saturation Voltage (I_C = 30 mAdc, I_B = 3.0 mAdc)		$V_{CE(sat)}$	—	5.0	Vdc
Base-Emitter On Voltage (I_C = 30 mA, V_{CE} = 20 V)		$V_{BE(on)}$	—	1.0	V
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product (I_C = 10 mA, V_{CE} = 20 V, f = 10 MHz)		f_T	15	—	MHz
Output Capacitance (V_{CB} = 20 V, f = 100 kHz)	(Common Base)	C_{obo}	—	12	pF

(1) PW ⩽ 300 μsec, Duty Cycle ⩽ 2.0%.