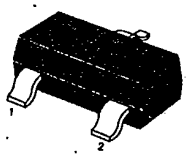
MMBTA05 NPN EPITAXIAL SILICON TRANSISTOR

T-29-19

DRIVER TRANSISTOR

SOT-23



1. Base 2. Emitter 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current (max)	I_C	500	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	Tstg	150	°C
Thermal Resistance Junction to Ambient	Rth(j-a)	357	°C/W

• Refer to MPSA05 for graphs

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Condition	Min	Max	Unit
*Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	60		V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=100μA, I_C=0	4		V
Collector Cutoff Current	I_{CBO}	V_{CB}=60V, I_E=0		0.1	μA
Collector Cutoff Current	I_{CEO}	V_{CE}=60V, I_B=0		0.1	μA
DC Current Gain	h_{FE}	V_{CE}=1V, I_C=10mA	50		
		V_{CE}=1V, I_C=100mA	50		
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=100mA, I_B=10mA		0.25	V
Base-Emitter On Voltage	V_{BE} (on)	V_{CE}=1V, I_C=100mA		1.2	V
Current Gain-Bandwidth Product	f_T	V_{CE}=2V, I_C=10mA, f=100MHz	100		MHz

* Pulse Test: PW≤300μs, Duty Cycle≤2%

Marking