Transys Electronics LIMITED

SOT-323 Plastic-Encapsulated Transistors

MMSTA42 TRANSISTOR (NPN)

SOT-323

1. BASE
2. EMITTER
3. COLLECTOR

Unit: mm

FEATURES

Power dissipation

$P_{CM:}$ 0.2 W (Tamb=25℃)

Collector current

$I_{CM:}$ 0.3 A

Collector-base voltage

$V_{(BR)CBO}$: 310 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic= 100μA, I_E=0	310		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic= 1 mA, I_B=0	305		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100μA, I_C=0	5		V
Collector cut-off current	I_{CBO}	V_{CB}=200V, I_E=0		0.25	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V, I_C=0		0.1	μA
DC current gain	$H_{FE(1)}$	V_{CE}= 10V, I_C= 1mA	60		
	$H_{FE(2)}$	V_{CE}= 10V, I_C=10mA	100	200	
	$H_{FE(3)}$	V_{CE}=10V, I_C=30mA	75		
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=20 mA, I_B= 2mA		0.2	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C= 20 mA, I_B=2mA		0.9	V
Transition frequency	f_T	V_{CE}= 20V, I_C= 10mA f=30MHz	50		MHz

DEVICE MARKING

MMSTA42=K3M