

NPN small signal transistor

MMSTA13

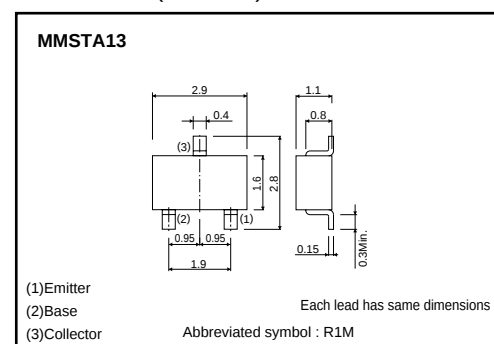
●Features

- 1) High Current Gain.

●Packaging specifications

Type	Package	Taping
	Code	T146
	Basic ordering unit (pieces)	3000
MMSTA13		○

●Dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CES}	30	V
Emitter-base voltage	V_{EBO}	10	V
Collector current	I_C	0.3	A
Collector power dissipation	P_C	0.2	W
		0.35	W *
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55 to 125	°C

* Mounted on a 7×5×0.6 mm CERAMIC SUBSTRATE

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CES}	30	—	—	V	$I_C = 100\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	30	—	—	V	$I_C = 10\mu A$
Emitter-base breakdown voltage	BV_{EBO}	10	—	—	V	$I_E = 10\mu A$
Collector-base cutoff current	I_{CBO}	—	—	0.1	μA	$V_{CB} = 30V$
Emitter-base cutoff current	I_{CEO}	—	—	0.1	μA	$V_{EB} = 10V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	$I_C/I_E = 100mA/100\mu A$
Base-emitter voltage	$V_{BE(on)}$	—	—	2.0	V	$V_{CE} = 5V, I_C = 100mA$ *
DC current transfer ratio	h_{FE}	5000	—	—	—	$V_{CE} = 5V, I_C = 10mA$
		10000	—	—		$V_{CE} = 5V, I_C = 100mA$ *
Transition frequency	f_T	125	—	—	MHz	$V_{CE} = 5V, I_E = -10mA, f = 100MHz$
Collector output capacitance	C_{ob}	—	5.4	—	pF	$V_{CB} = 10V, f = 100kHz, I_E = 0$

* Pulsed

Notes

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