RT1P137S

Transistor With Resistor For Switching Application Silicon PNP Epitaxial Type

DESCRIPTION

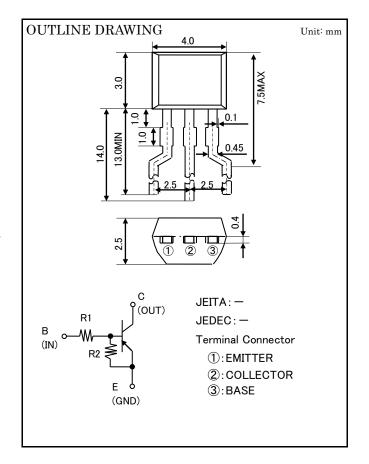
RT1P137S is a one chip transistor with built-in bias resistor, NPN type is RT1N137S.

FEATURE

 $\begin{array}{ll} \mbox{Built-in bias resistor} & (R_1 \! = \! 1k\,\Omega\,,\,R_2 \! = \! 22k\,\Omega\,) \\ \mbox{High collector current} & (I_C \! = \! -1A) \\ \mbox{Low $V_{CE(sat)}$} & V_{CE(sat)} \! = \! -0.3V \\ & (@I_C \! = \! -300mA/I_B \! = \! -3mA) \end{array}$

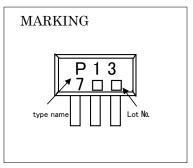
APPLICATION

Inverted circuit, Switching circuit, Interface circuit, Driver circuit



MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING	UNIT	
V_{CBO}	Collector to Base voltage -40		V	
$ m V_{EBO}$	Emitter to Base voltage	-6	V	
$V_{\rm CEO}$	Collector to Emitter voltage	-40	V	
I_{C}	Collector current	-1	A	
${f I}_{ m CM}$	Peak Collector current	-2	A	
Pc	Collector dissipation	600	mW	
$T_{\rm j}$	Junction temperature	+150	င္	
${ m T_{stg}}$	Storage temperature	-55 ~ +150	င	

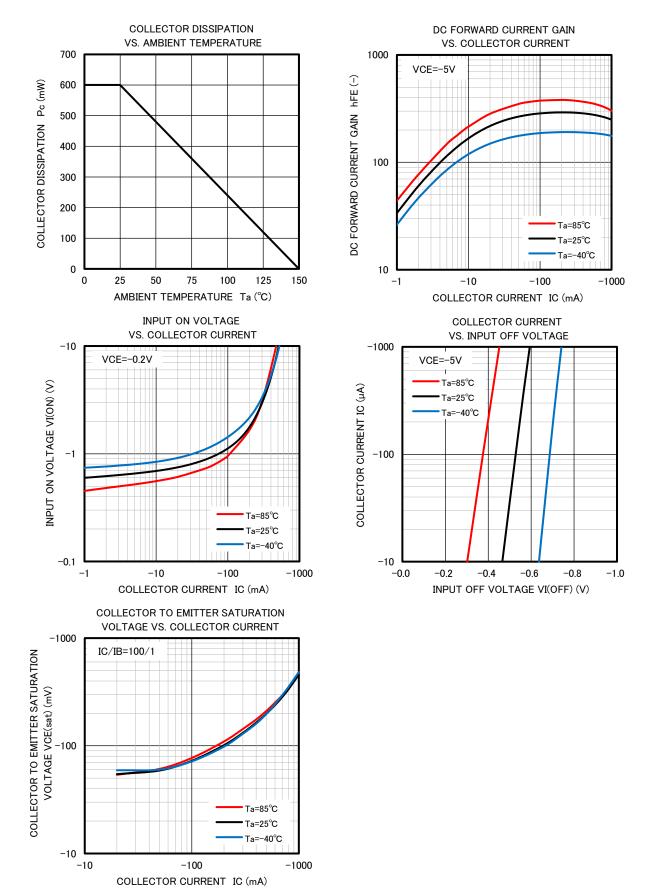


ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			TINITE
			MIN	TYP	MAX	UNIT
V(BR)CEO	C to E breakdown voltage	$I_C=-1$ mA, $R_{BE}=\infty$	-40	_	_	V
I_{CBO}	Collector cut off current	V _{CB} =-40V, I _E =0	_	_	-0.1	μA
I_{EBO}	Emitter cut off current	V_{EB} =-5V, I_{C} =0	-168	-217	-310	μA
${ m h}_{ m FE}$	DC forward current gain	V _{CE} =-5V, I _C =-100mA	100	_	_	_
$V_{\mathrm{CE(sat)}}$	C to E saturation voltage	I_C =-300mA, I_B =-3mA	_	-0.1	-0.3	V
$V_{\rm I(ON)}$	Input on voltage	V_{CE} =-0.2V, I_{C} =-300mA	_	-2.4	-4.0	V
$V_{\rm I(OFF)}$	Input off voltage	V _{CE} =-5V, I _C =-100μA	-0.4	-0.53	_	V
R_1	Input resistor	_	0.7	1.0	1.3	kΩ
$R_2 \nearrow R_1$	Resistor ratio	_	20	22	24	_
\mathbf{f}_{T}	Gain band width product	V_{CE} =-6 V , I_{E} =10 mA	_	130	_	MHz

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TYPICAL CHARACTERISTICS



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