

Features

- **Pb-Free package is available**
RoHS product for packing code suffix "G"
Halogen free product for packing code suffix "H"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit)
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects
- Only the on/off conditions need to be set for operation, making device design easy

Absolute Maximum Ratings

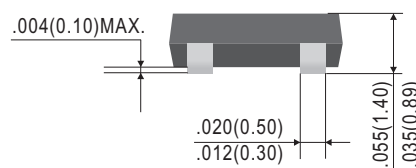
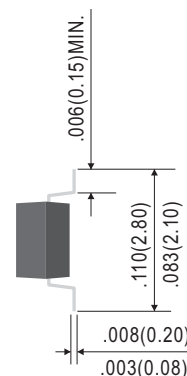
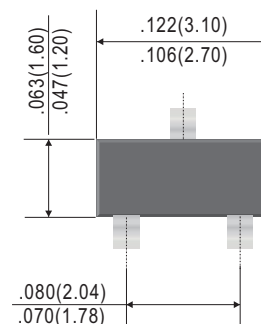
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-100	mA
Collector Dissipation	P_C	200	mW
Junction Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

Electrical Characteristics

Sym	Parameter	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C = -50\mu A, I_E = 0$)	-50	---	---	V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C = -1mA, I_B = 0$)	-50	---	---	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E = -50\mu A, I_C = 0$)	-5	---	---	V
I_{CBO}	Collector Cut-off Current ($V_{CB} = -50V, I_E = 0$)	---	---	-0.5	μA
I_{EBO}	Emitter Cut-off Current ($V_{EB} = -4V, I_C = 0$)	---	---	-0.5	μA
h_{FE}	DC Current Gain ($V_{CE} = -5V, I_C = -1mA$)	100	250	600	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = -10mA, I_B = -1mA$)	---	---	-0.3	V
R_1	Input Resistor	7	10	13	$K\Omega$
f_T	Transition Frequency ($V_{CE} = -10V, I_C = -5mA, f = 100MHz$)	---	250	---	MHz

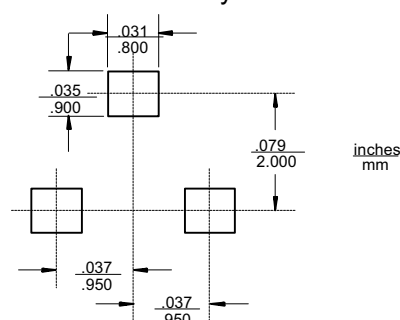
*Marking: 94

SOT-23



Dimensions in inches and (millimeters)

Suggested Solder Pad Layout



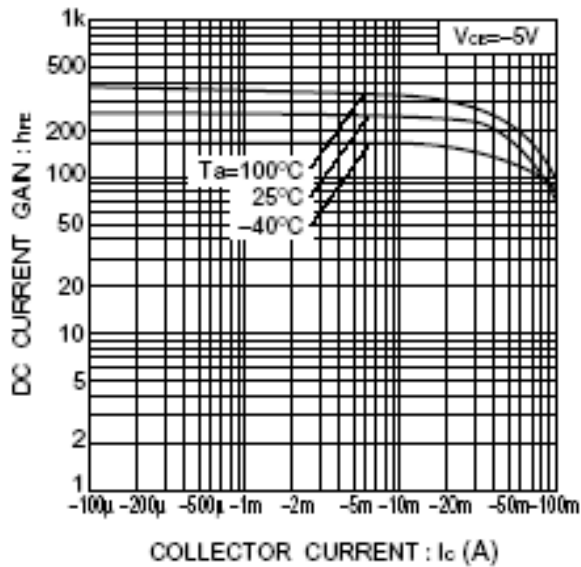


Fig.1 DC current gain vs. collector current

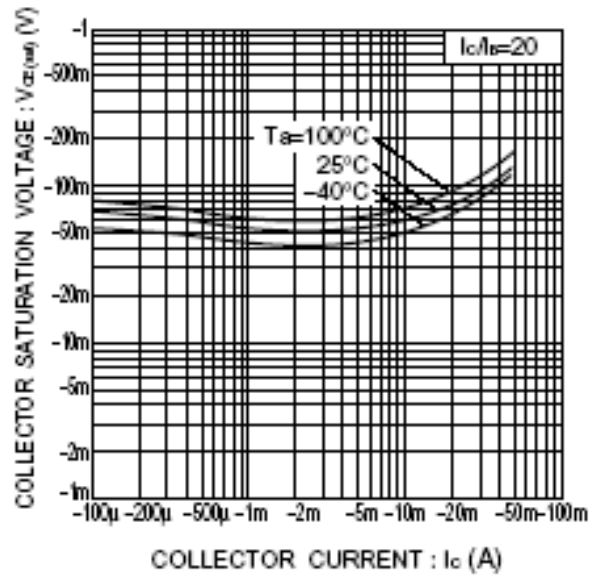
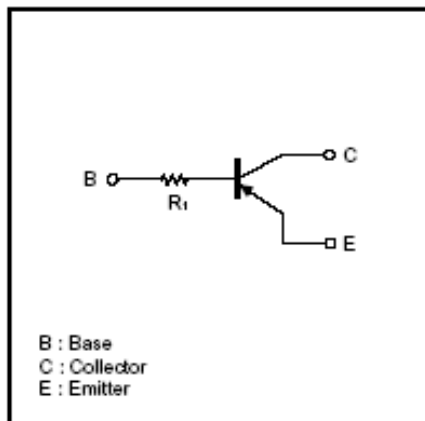


Fig.2 Collector-emitter saturation voltage vs. collector current

●Equivalent circuit



Ordering Information:

Device PN	Packing
DTA114TCA-T ⁽¹⁾ G ⁽²⁾ -WS	Tape & Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

Disclaimer

WILLAS reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. WILLAS or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on WILLAS data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. WILLAS does not assume any liability arising out of the application or use of any product or circuit.

WILLAS products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of WILLAS. Customers using or selling WILLAS components for use in such applications do so at their own risk and shall agree to fully indemnify WILLAS Inc and its subsidiaries harmless against all claims, damages and expenditures.