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Stocking Distributor

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[STA302A](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

STA302A

PNP Darlington

General purpose/3-phase motor drive

External dimensions STA (8-pin)

Absolute maximum ratings

($T_a=25^\circ\text{C}$)

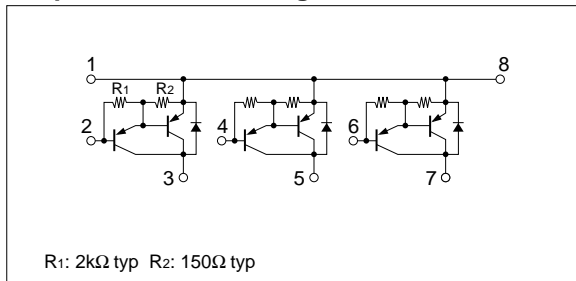
Symbol	Ratings	Unit
V_{CBO}	-50	V
V_{CEO}	-50	V
V_{EBO}	-6	V
I_C	-4	A
I_{CP}	-8 (PW \leq 10ms, $D_u\leq$ 50%)	A
P_T	3 ($T_a=25^\circ\text{C}$)	W
	15 ($T_c=25^\circ\text{C}$)	
T_j	150	$^\circ\text{C}$
T_{stg}	-40 to +150	$^\circ\text{C}$

Electrical characteristics

($T_a=25^\circ\text{C}$)

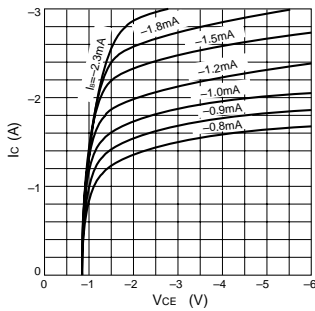
Symbol	Specification			Unit	Conditions
	min	typ	max		
I_{CBO}			-100	μA	$V_{CB}=-50\text{V}$
I_{EBO}			-10	mA	$V_{EB}=-6\text{V}$
V_{CEO}	-50			V	$I_C=-10\text{mA}$
hFE	1000				$V_{CE}=-4\text{V}$, $I_C=-3\text{A}$
$V_{CE(sat)}$			-2.0	V	$I_C=-3\text{A}$, $I_B=-10\text{mA}$
t_{on}		0.4		μs	$V_{CC}=-30\text{V}$, $I_C=-3\text{A}$, $I_{B1}=-I_{B2}=-10\text{mA}$
t_{stg}		0.8		μs	
t_f		0.6		μs	

Equivalent circuit diagram

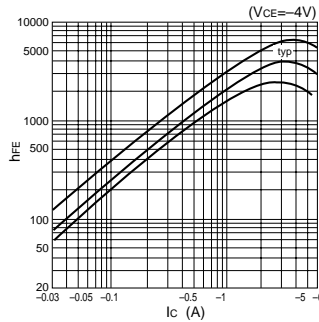


Characteristic curves

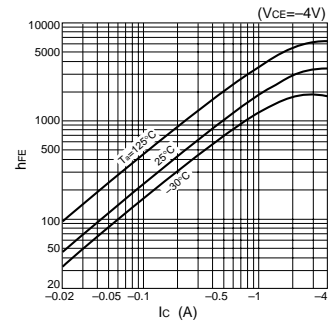
I_C - V_{CE} Characteristics (Typical)



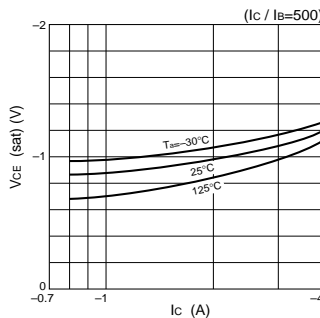
hFE- I_C Characteristics (Typical)



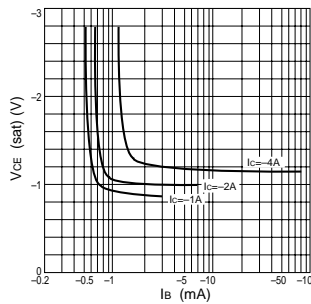
hFE- I_C Temperature Characteristics (Typical)



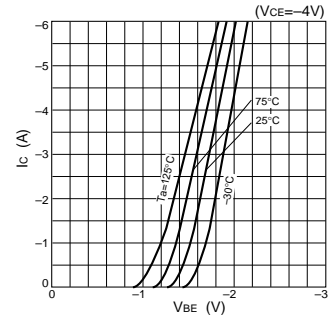
$V_{CE(sat)}$ - I_C Temperature Characteristics (Typical)



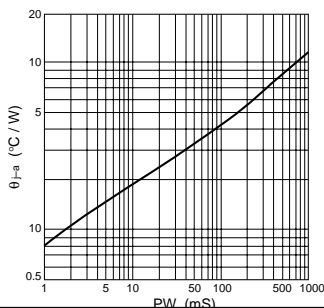
$V_{CE(sat)}$ - I_B Characteristics (Typical)



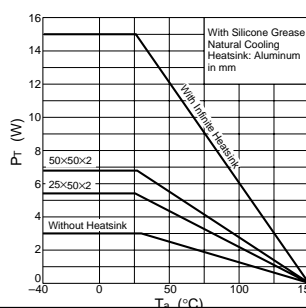
I_C - V_{BE} Temperature Characteristics (Typical)



θ_{j-a} -PW Characteristics



P_T - T_a Characteristics



Safe Operating Area (SOA)

