

STA352A

PNP Darlington

General purpose/3-phase motor drive

External dimensions  STA (8-pin)

Absolute maximum ratings

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

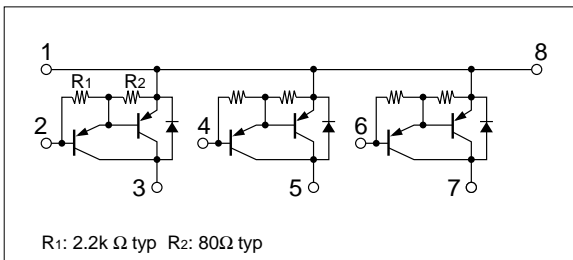
Symbol	Ratings	Unit
V_{CBO}	-100	V
V_{CEO}	-100	V
V_{EBO}	-5	V
I_C	-5	A
I_{CP}	-8 ($PW \leq 1\text{ms}$, $D_u \leq 25\%$)	A
I_B	-0.1	A
P_T	3 ($T_a=25^\circ\text{C}$)	W
	15 ($T_c=25^\circ\text{C}$)	
T_j	150	$^\circ\text{C}$
T_{stg}	-40 to +150	$^\circ\text{C}$
θ_{j-c}	8.33	$^\circ\text{C/W}$

Electrical characteristics

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

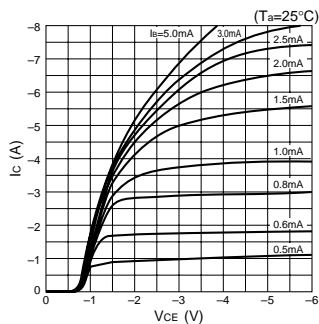
Symbol	Specification			Unit	Conditions
	min	typ	max		
I_{CBO}			-10	μA	$V_{CB}=-100\text{V}$
I_{EBO}	-1.4	-2.2	-5.0	mA	$V_{EB}=-5\text{V}$
V_{CEO}	-100			V	$I_C=-30\text{mA}$
h_{FE}	1000				$V_{CE}=-3\text{V}$, $I_C=-3\text{A}$
$V_{CE(sat)}$		-1.3	-2.0	V	$I_C=-3\text{A}$, $I_B=-12\text{mA}$
$V_{BE(sat)}$		-2.0	-2.5	V	
V_{FEC}		-1.2		V	$I_{FEC}=-3\text{A}$
t_{on}		0.3		μs	$V_{CC}=-30\text{V}$, $I_C=-3\text{A}$,
t_{stg}		2.4		μs	
t_f		0.6		μs	$I_{B1}=-I_{B2}=12\text{mA}$
C_{ob}		55		pF	$V_{CB}=-50\text{V}$, $f=1\text{MHz}$

Equivalent circuit diagram

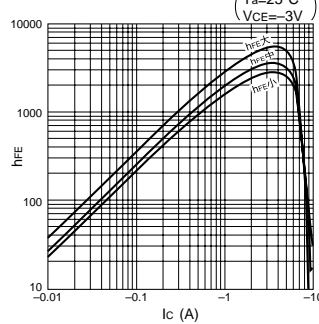


Characteristic curves

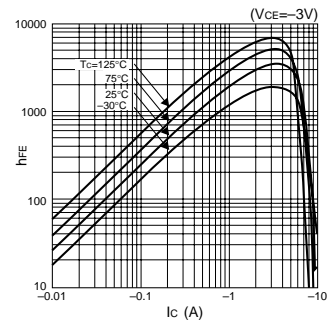
I_C - V_{CE} Characteristics (Typical)



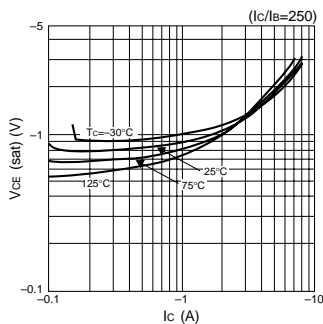
h_{FE} - I_C Characteristics (Typical)



h_{FE} - I_C Temperature Characteristics (Typical)

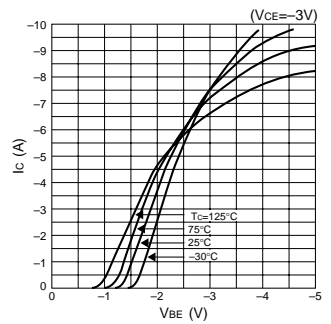


$V_{CE(sat)}$ - I_C Temperature Characteristics (Typical)

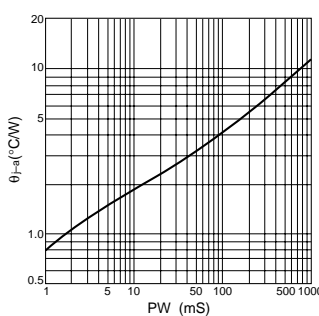


$V_{CE(sat)}$ - I_B Characteristics (Typical)

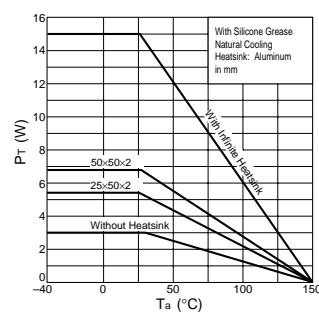
I_C - V_{BE} Temperature Characteristics (Typical)



θ_{j-a} - PW Characteristics



P_T - T_a Characteristics



Safe Operating Area (SOA)

