STA403A

NPN Darlington
General purpose

External dimensions Ⓓ ··· STA (10-pin)

Absolute maximum ratings

(Ta=25°C)

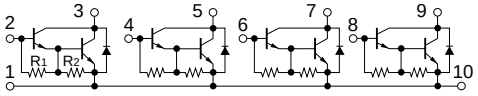
Symbol	Ratings	Unit
V_{CBO}	120	V
V_{CEO}	100	V
V_{EBO}	6	V
I_C	4	A
I_{CP}	8 (PW≤10ms, Du≤50%)	A
P_T	4 (Ta=25°C)	W
	20 (Tc=25°C)	
T_j	150	°C
T_{stg}	–40 to +150	°C

Electrical characteristics

(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
I_{CBO}			100	μA	V_{CB}=120V
I_{EBO}			10	mA	V_{EB}=6V
V_{CEO}	100			V	I_C=10mA
h_{FE}	1000				V_{CE}=4V, I_C=2A
V_{CE}(sat)			2.0	V	I_C=2A, I_B=10mA
ton		0.6		μs	V_{CC}≒40V,
tstg		5.0		μs	I_C=2A,
tf		2.0		μs	I_{B1}=–I_{B2}=10mA

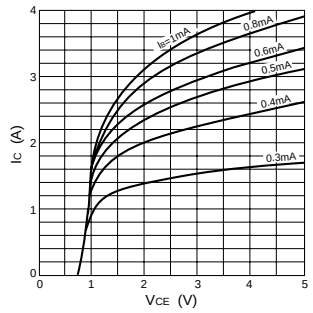
■Equivalent circuit diagram



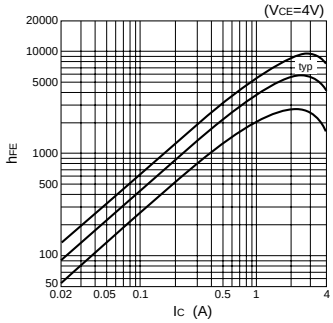
R1: 3kΩ typ R2: 500Ω typ

Characteristic curves

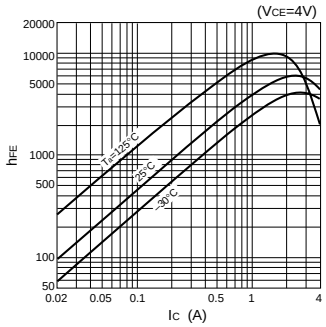
I_C-V_{CE} Characteristics (Typical)



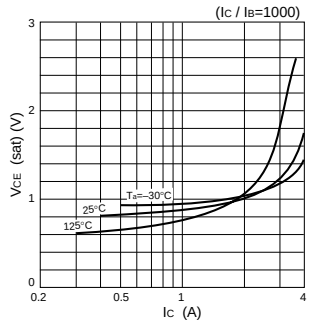
h_{FE}-I_C Characteristics (Typical)



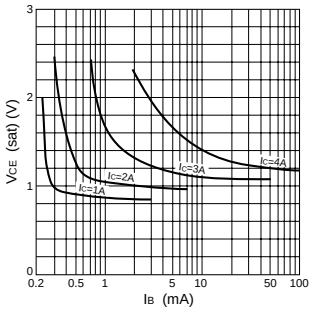
h_{FE}-I_C Temperature Characteristics (Typical)



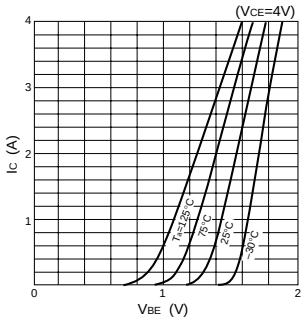
V_{CE}(sat)-I_C Temperature Characteristics (Typical)



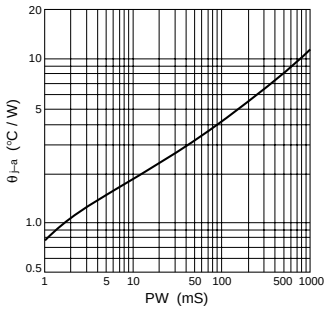
V_{CE}(sat)-I_B Characteristics (Typical)



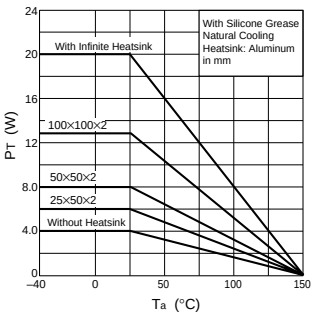
I_C-V_{BE} Temperature Characteristics (Typical)



$\theta_{j\text{-}a}$-PW Characteristics



P_T-T_a Characteristics



Safe Operating Area (SOA)

