Power Transistor Array STA415A

Absolute Maximum Ratings (Ta=25ºC)

Symbol	Ratings	Unit
V_{CBO}	35±5	V
V_{CEO}	36±5	V
V_{EBO}	6	V
I_C	2 (pulse 3*)	A
I_B	30	mA
P_T	4 (Ta = 25ºC)	W
	18 (Tc = 25ºC)	W
Tj	150	ºC
Tstg	–55 to +150	ºC

* $P_W \leqq 1$ms, Duty $\leqq 25\%$

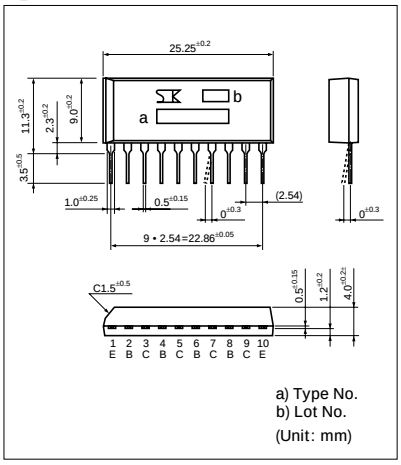
Electrical Characteristics (Ta=25ºC)

Symbol	Test Conditions	Ratings	Unit
I_{CBO}	V_{CB} = 30V	10max	µA
I_{EBO}	V_{EB} = 6V	2.7max	mA
V_{CEO}	I_C = 25mA	31 to 41	V
h_{FE}	V_{CE} = 4V, I_C = 0.7A	400min	
V_{CE} (sat)	I_C = 0.5A, I_B = 5mA	0.2max	V
	I_C = 1A, I_B = 5mA	0.5max	V
V_{FEC}	I_{FEC} = 2A	2.5max	V
R_B		800±120	Ω
R_{BE}		2.0±0.4	kΩ
Es/b	L = 10mH, single pulse	50min	mJ

Typical Switching Characteristics

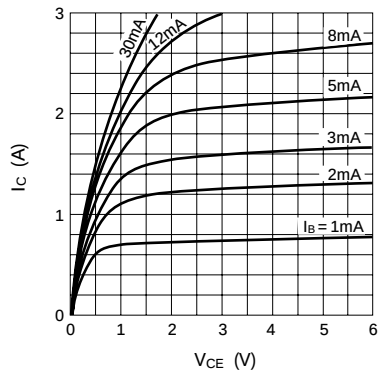
V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (mA)	I_{B2} (mA)	t_{on} (µs)	t_{stg} (µs)	t_f (µs)
12	12	1	10	–5	5	0	1.0	8.5	2.5

External Dimensions STA4 (LF412)

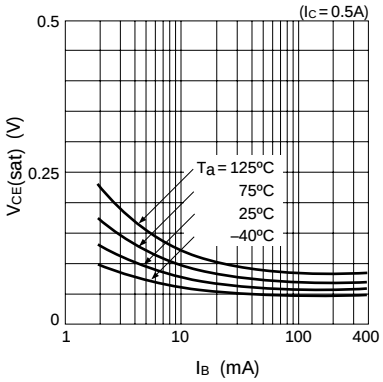


a) Type No.
b) Lot No.
(Unit: mm)

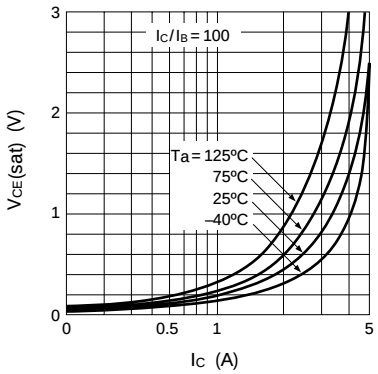
■ I_C — V_{CE} Characteristics (typ.)



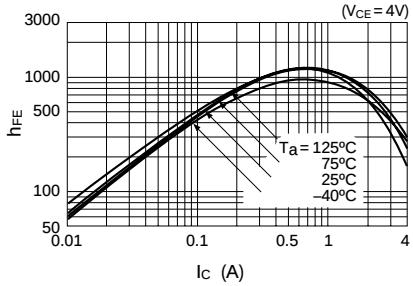
■ V_{CE} (sat) — I_B Temperature Characteristics



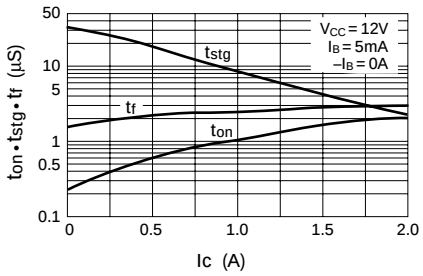
■ V_{CE} (sat) — I_C Temperature Characteristics



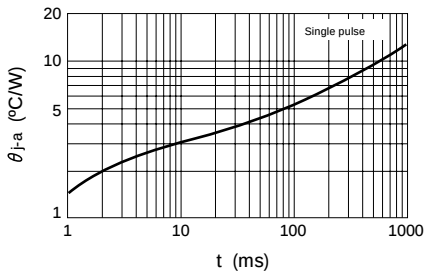
■ h_{FE} — I_C Temperature Characteristics



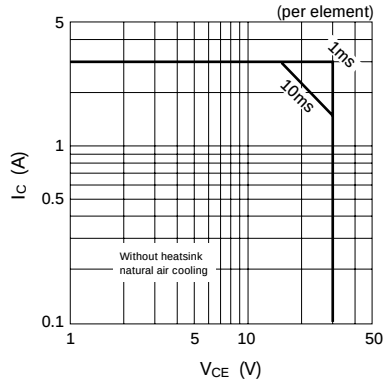
■ $t_{on} \cdot t_{stg} \cdot t_f$ — I_C Characteristics (typ.)



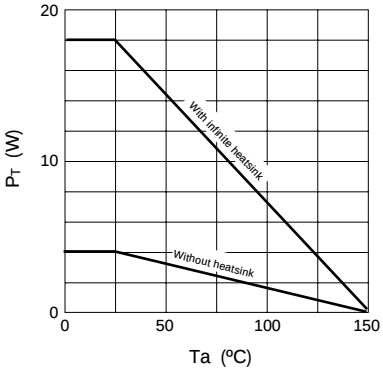
■ $\theta_{j\text{-}a}$ — t Characteristics



■ Safe Operating Area (single pulse)



■ P_T — Ta Derating



Equivalent Circuit Diagram