

Power Transistor Array STA415A

Absolute Maximum Ratings (Ta=25°C)

Symbol	Ratings	Unit
V _{CB0}	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 = 25°C)	W
	18 (Tc = 25°C)	W
T _J	150	°C
Tstg	-55 to +150	°C

* P_W ≤ 1ms, Duty ≤ 25%

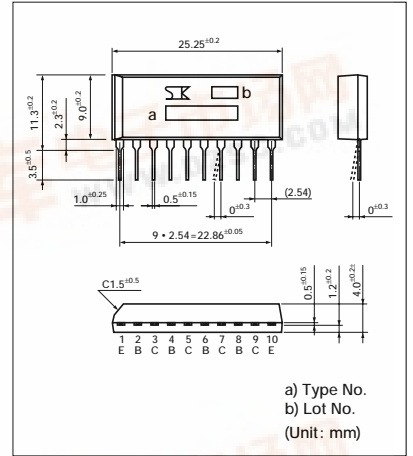
Electrical Characteristics (Ta=25°C)

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

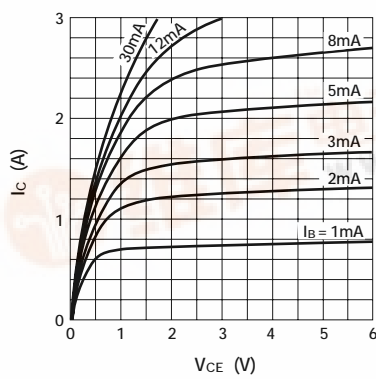
Typical Switching Characteristics

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 _r (μs)
12	12	1	10	-5	5	0	1.0	8.5	2.5

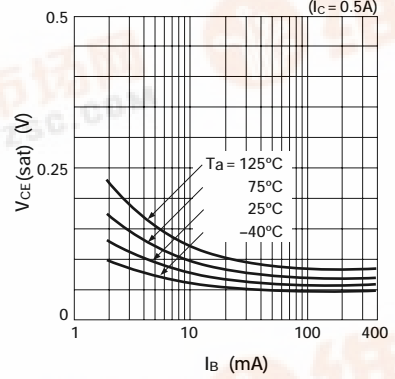
External Dimensions STA4 (LF412)



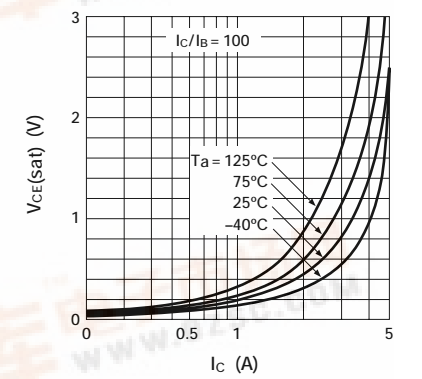
I_C — V_{CE} Characteristics (typ.)



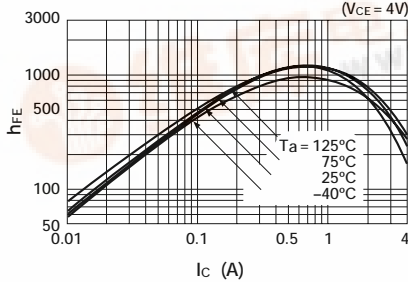
V_{CE(sat)} — I_B Temperature Characteristics (I_C = 0.5A)



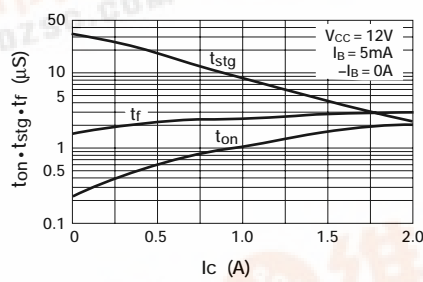
V_{CE(sat)} — I_C Temperature Characteristics (I_B/I_C = 100)



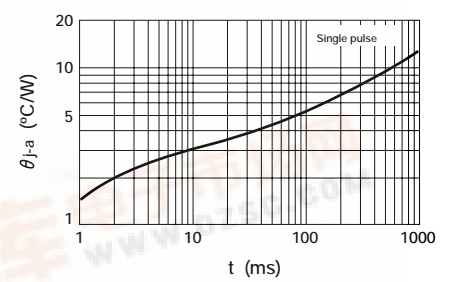
h_{FE} — I_C Temperature Characteristics (V_{CE} = 4V)



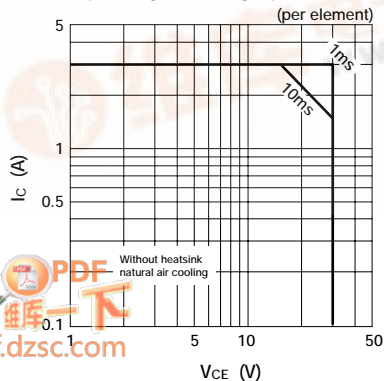
t_{on} · t_{stg} · t_r — I_C Characteristics (typ.)



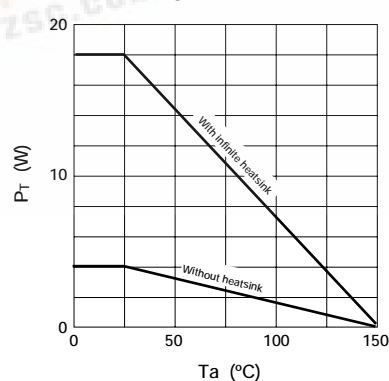
θ_{J-a} — t Characteristics (Single pulse)



Safe Operating Area (single pulse) (per element)



P_T — T_a Derating



Equivalent Circuit Diagram

