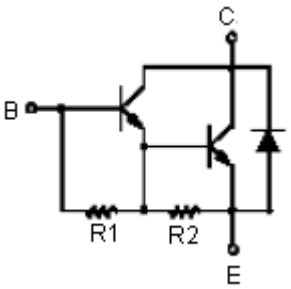
Silicon NPN Power Transistor

Features:

- High Voltage
- Darlington

Applications:

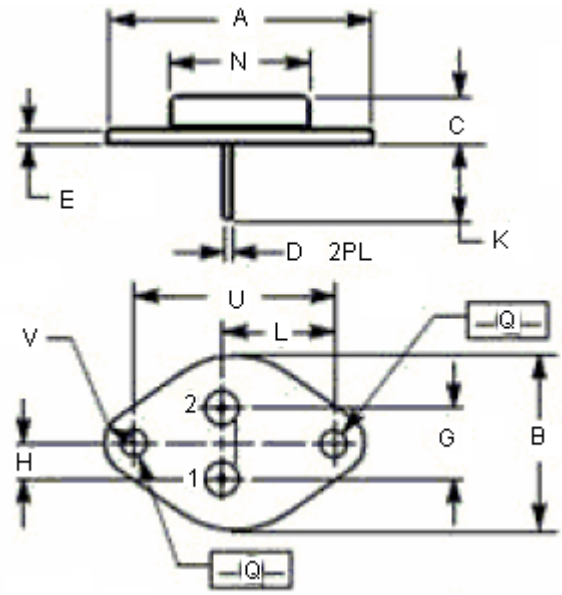
High ruggedness electronic ignitions
High voltage ignition coil driver



Pin

1. Base
2. Emitter
3. Collector (Case)

TO-3



Dimensions	mm	
	Minimum	Maximum
A	39	
B	25.3	26.67
C	7.8	8.3
D	0.9	1.1
E	1.4	1.6
G	10.92	
H	5.46	
K	11.4	13.5
L	16.75	17.05
N	19.4	19.62
Q	4	4.2
U	30	30.2
V	4.3	4.5

Dimensions : Millimetres

Absolute Maximum Ratings (T_a = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - base voltage	500	V
V_{CEO}	Collector - emitter voltage	400	V

Absolute Maximum Ratings (T_a = 25°C)

Symbol	Parameter	Value	Unit
V_{EBO}	Emitter - base voltage	5	V
I_C	Collector current - continuous	15	A
I_{CM}	Collector current - peak	30	A
I_B	Base current	1	A
I_{BM}	Base current - peak	5	A
P_C	Collector power dissipation at T_C = 25°C	180	W
T_j	Junction temperature	200	°C
T_{stg}	Storage temperature range	-65 to 200	°C

Thermal Characteristics

Symbol	Parameter	Maximum	Unit
$R_{th\ j\text{-}c}$	Thermal resistance, junction to case	0.97	°C/W

Electrical Characteristics (T_C = 25°C Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Typical	Maximum	Unit
$V_{CEO\ (SUS)}$	Collector - emitter sustaining voltage	I_C = 0.1 A; I_B = 0; L = 10 mH	400	-	-	V
$V_{CE\ (sat)\text{-}1}$	Collector - emitter saturation voltage	I_C = 8 A; I_B = 100 mA	-	-	1.6	V
$V_{CE\ (sat)\text{-}2}$	Collector - emitter saturation voltage	I_C = 10 A; I_B = 250 mA	-	-	1.8	V
$V_{CE\ (ast)\text{-}\ 3}$	Collector - emitter saturation voltage	I_C = 12 A; I_B = 300 mA	-	-	2	V
$V_{BE\ (sat)\text{-}1}$	Base - emitter saturation voltage	I_C = 8 A; I_B = 100 mA	-	-	2.2	V
$V_{BE\ (sat)\text{-}2}$	Base - emitter saturation voltage	I_C = 10 A; I_B = 250 mA	-	-	2.5	V
$V_{BE\ (sat)\text{-}3}$	Base - emitter saturation voltage	I_C = 12 A; I_B = 300 mA	-	-	2.7	V
I_{CES}	Collector cut-off current	V_{CE} = 500 V; I_B = 0 V_{CE} = 500 V; I_B = 0; T_j = 125°C	-	-	0.1 0.5	mA
I_{CEO}	Collector cut-off current	V_{CE} = 500 V; I_B = 0 V_{CE} = 500 V; I_B = 0; T_j = 125°C	-	-	0.1 0.5	mA
I_{EBO}	Emitter cut-off current	V_{EB} = 5 V; I_C = 0	-	-	20	mA
h_{FF}	DC current gain	I_C = 0.5 A; V_{CF} = 10 V	300	-	-	-
V_{ECF}	C-E Diode forward voltage	I_F = 10 A	-	-	2.5	V

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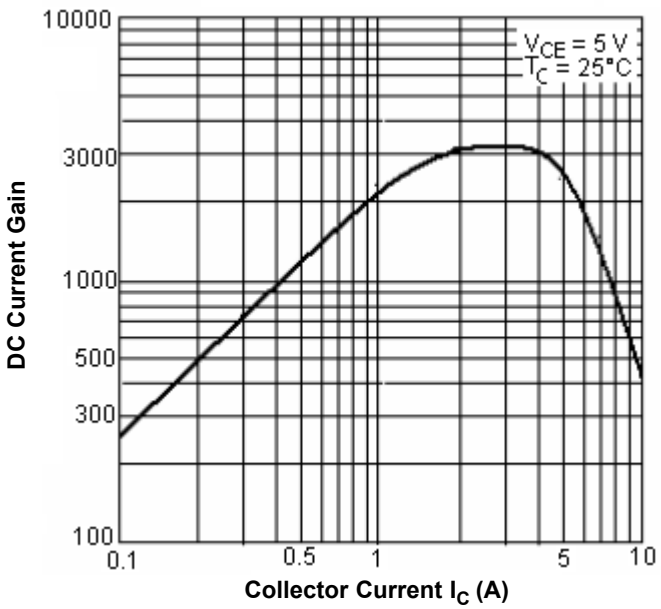
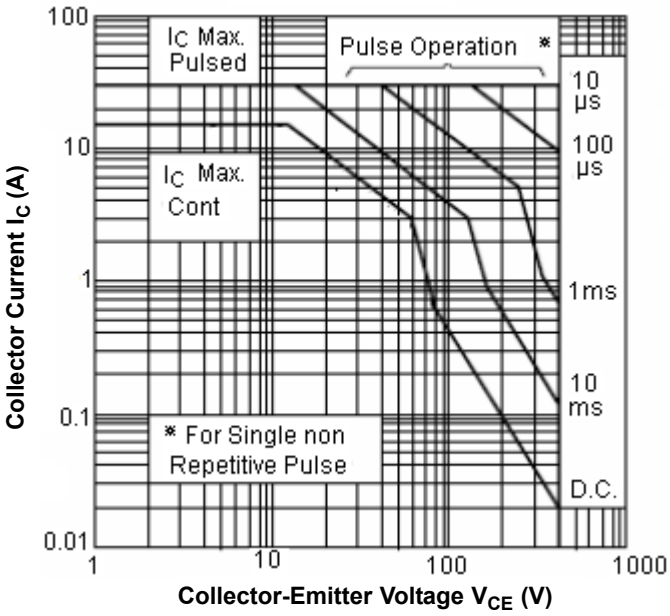
multicomp

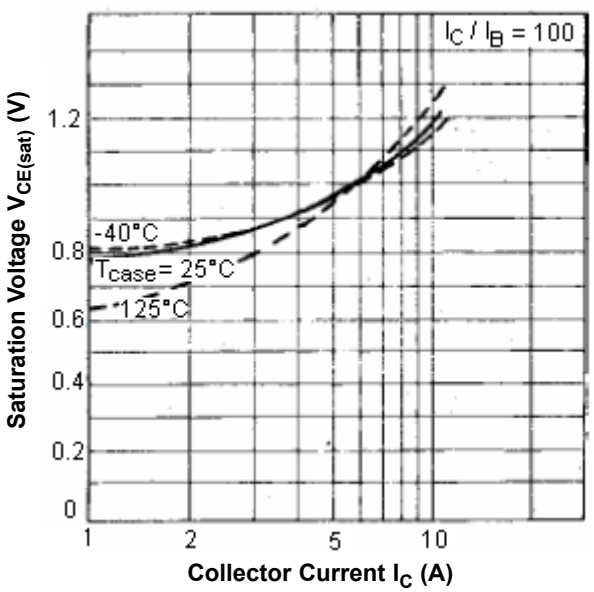
h_{FE}-I_C Characteristics



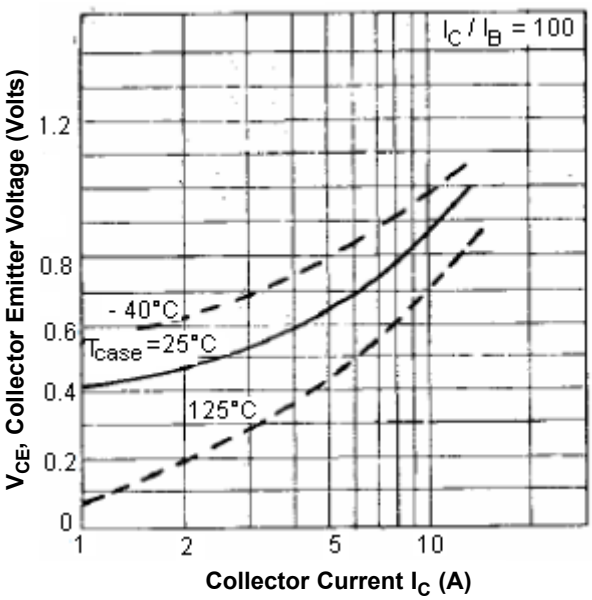
Safe Operating Area



$V_{BE\ (sat)}$-I_C Characteristics



$V_{BE\ (sat)}$-I_C Characteristics



Part Number Table

Description	Part Number
Silicon NPN Power Transistor	BU941

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