

isc Silicon NPN Power Transistor

2SC4064

DESCRIPTION

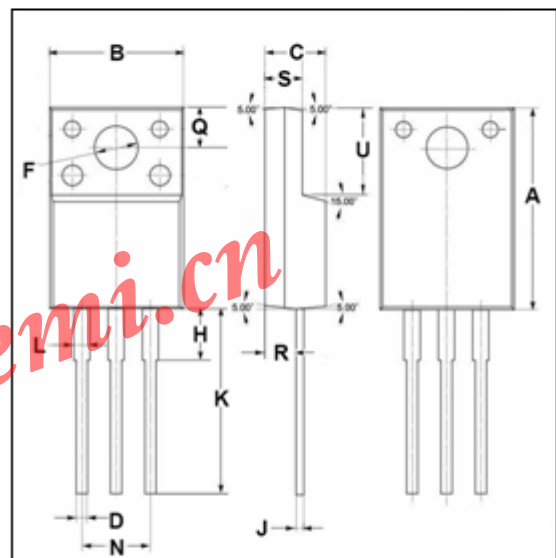
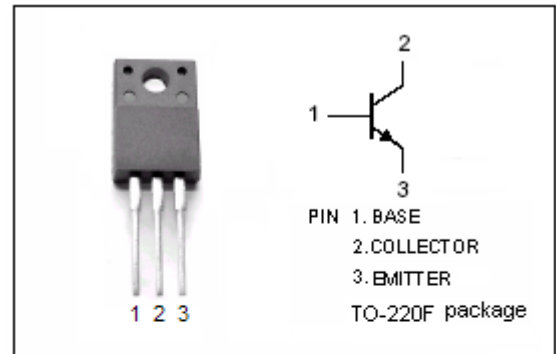
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 0.35V(\text{Max}) @ I_C = 6A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50V (\text{Min})$
- Complement to Type 2SA1567

APPLICATIONS

- Designed for use in DC motor driver and general purpose applications

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	12	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	35	W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-55~150	°C



DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.80
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

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ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=25\text{mA}$; $I_B=0$	50			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=6\text{A}$; $I_B=0.3\text{A}$			0.35	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}$; $I_E=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=6\text{V}$; $I_C=0$			10	μA
h_{FE}	DC Current Gain	$I_C=6\text{A}$; $V_{CE}=1\text{V}$	50			
f_T	Current-Gain—Bandwidth Product	$I_E=-0.5\text{A}$; $V_{CE}=12\text{V}$		40		MHz
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=12\text{V}$; $f_{test}=1.0\text{MHz}$		180		pF

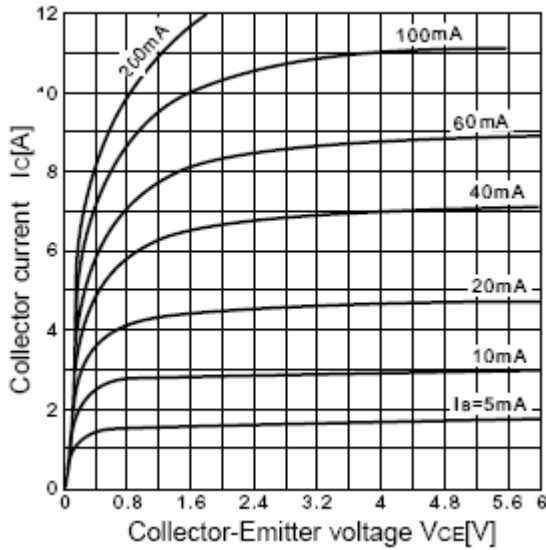
Switching times

t_{on}	Turn-on Time	$I_C=6\text{A}$; $I_{B1}=-I_{B2}=0.12\text{A}$ $R_L=4\Omega$; $V_{CC}=24\text{V}$		0.6		μs
t_{stg}	Storage Time			1.4		μs
t_f	Fall Time			0.4		μs

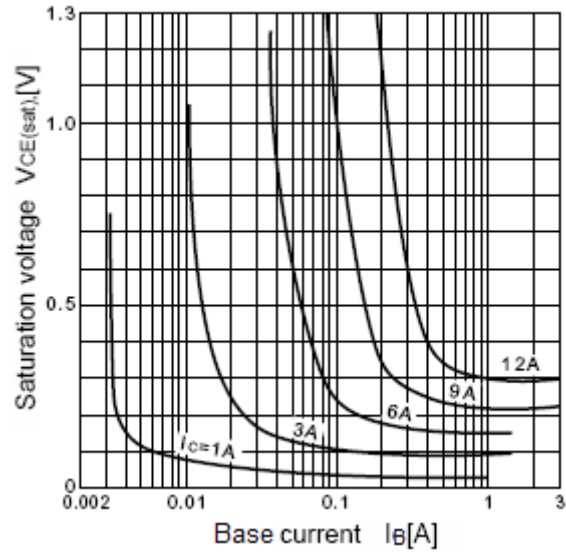
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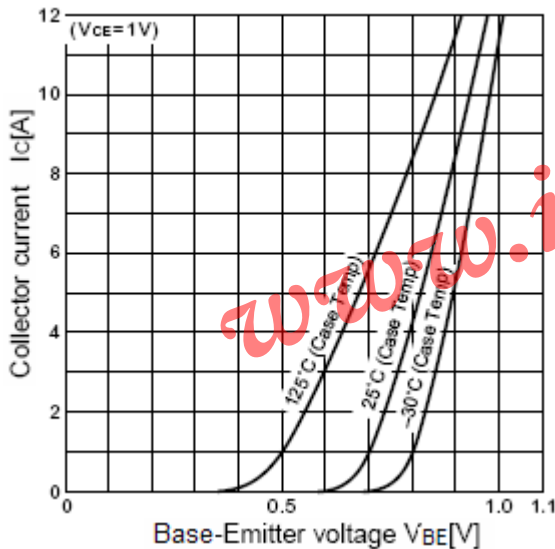
I_C - V_{CE} Characteristics



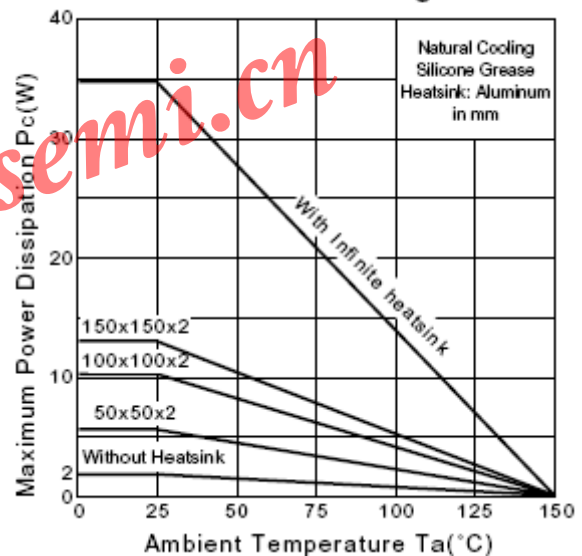
$V_{CE(sat)}$ - I_B Characteristics



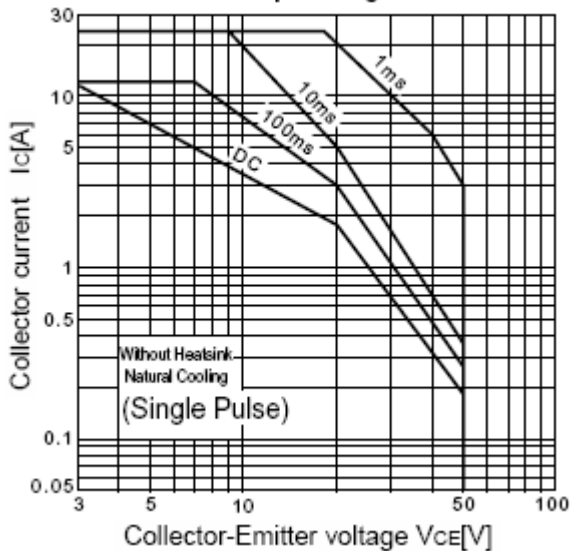
I_C - V_{BE} Characteristics



Power Derating



Safe Operating Area



h_{FE} - I_C Characteristics

