

2SC4658

SILICON NPN EPITAXIAL TYPE

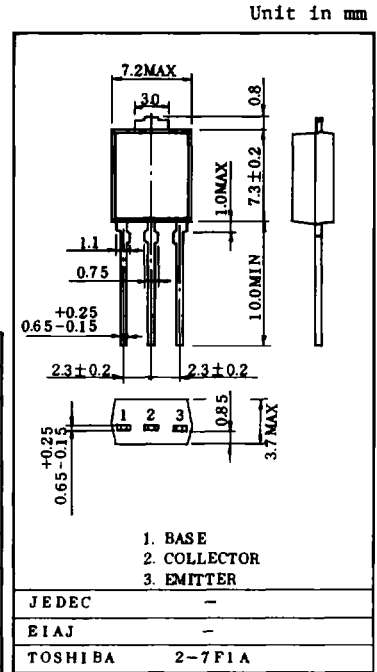
HIGH CURRENT SWITCHING APPLICATIONS.
DC-DC CONVERTER APPLICATIONS

FEATURES:

- Excellent h_{FE} Linearity
: $h_{FE}=100\sim 320$ at $V_{CE}=1V, I_C=1A$
- Low Collector Saturation Voltage
: $V_{CE(sat)}=0.4V$ (Max.) at $I_C=3A, I_B=0.15A$
- High Power Dissipation
: $P_C=1.3W$ ($T_a=25^\circ C$)
- Complementary to 2SA1794

MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	DC	I_C	A
	Pulse	I_{CP}	
Base Current	I_B	1	A
Collector Power Dissipation	$T_a=25^\circ C$	P_C	1.3
	$T_c=25^\circ C$		15
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



Weight: 0.72g

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=100V, I_E=0$	-	-	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=7V, I_C=0$	-	-	1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	80	-	-	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=1A$	100	-	320	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=3A$	60	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	-	0.2	0.4	V
	Base-Emitter	$V_{BE(sat)}$	-	0.9	1.2	
Transition Frequency	f_T	$V_{CE}=4V, I_C=1A$	-	120	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	80	-	pF
Switching Time	Turn-on Time	t_{on}	-	0.2	-	μs
	Storage Time	t_{stg}	-	1.0	-	
	Fall Time	t_f	-	0.1	-	

$I_{B1} = -I_{B2} = 0.15A$
DUTY CYCLE $\leq 1\%$

$V_{CC} = 30V$

