

2SD1411

SILICON NPN TRIPLE DIFFUSED TYPE

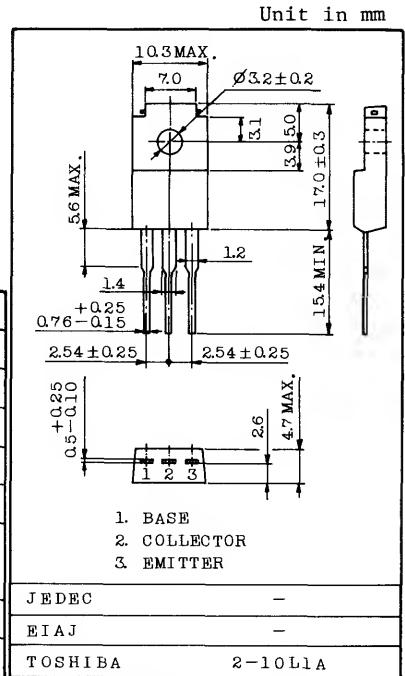
HIGH CURRENT SWITCHING APPLICATIONS.
POWER AMPLIFIER APPLICATIONS.

FEATURES:

- Low Saturation Voltage
: $V_{CE(sat)}=0.5V(\text{Max.})$ at $I_C=4A$
- Complementary to 2SB1018

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}	5	V
Collector Current		I_C	7	A
Base Current		I_B	1	A
Collector Power Dissipation	$T_a=25^\circ C$	P_C	2.0	W
	$T_c=25^\circ C$		30	
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 ~ 150	$^\circ C$



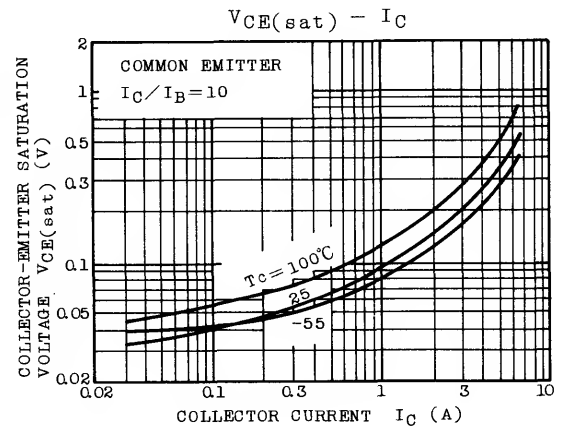
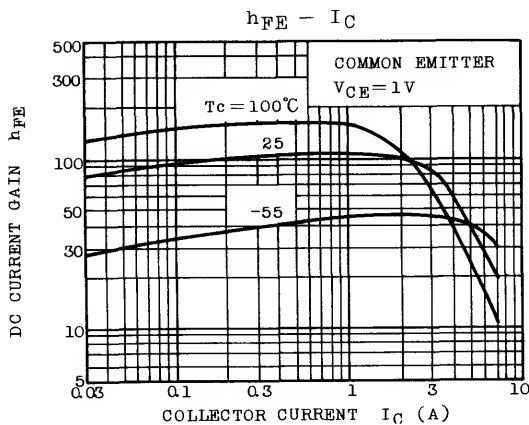
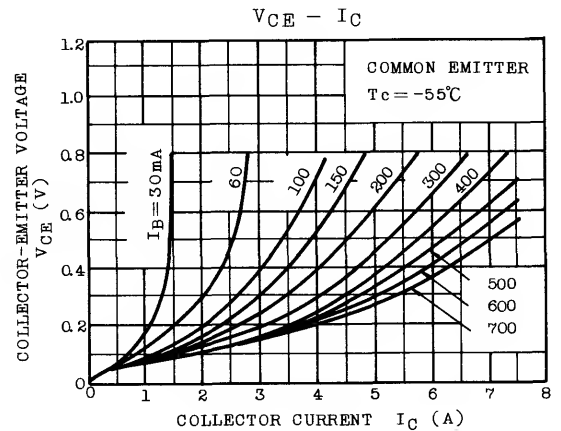
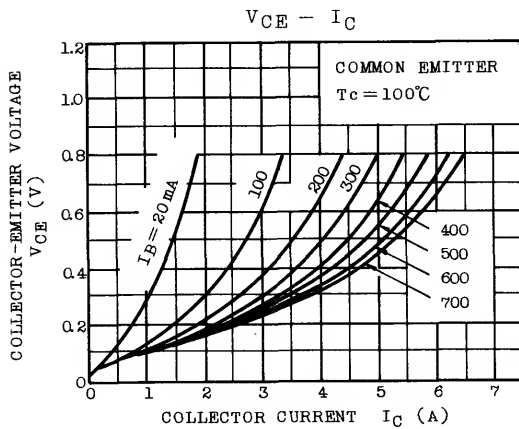
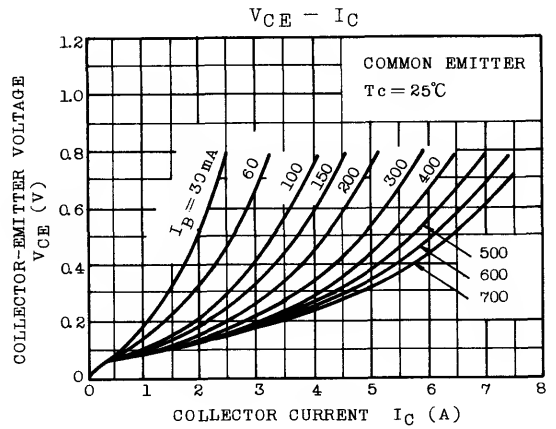
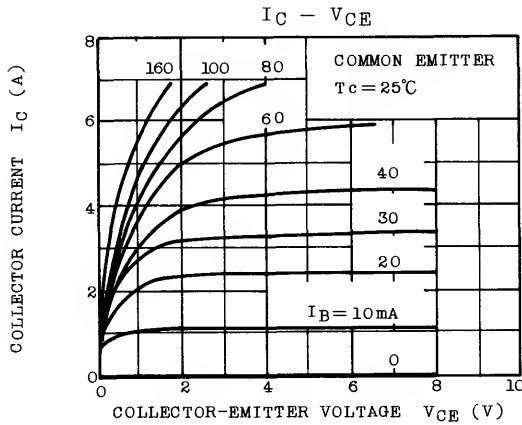
Weight : 2.1g

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=100V, I_E=0$	-	-	5	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	5	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	80	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE}=1V, I_C=1A$	70	-	240	
		$h_{FE(2)}$	$V_{CE}=1V, I_C=4A$	30	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C=4A, I_B=0.4A$	-	0.25	0.5	V
	Base-Emitter	$V_{BE(sat)}$	$I_C=4A, I_B=0.4A$	-	0.9	1.4	
Transition Frequency		f_T	$V_{CE}=4V, I_C=1A$	-	10	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	250	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.4	-	μs
	Storage Time	t_{stg}		-	2.5	-	
	Fall Time	t_f		-	0.5	-	

Note : $h_{FE(1)}$ Classification 0 : 70 ~ 140, Y : 120 ~ 240

TOSHIBA CORPORATION



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