

14E D 7964142 0007674 0

**KSD5015**  
SAMSUNG SEMICONDUCTOR INC

**NPN TRIPLE DIFFUSED  
PLANAR SILICON TRANSISTOR**

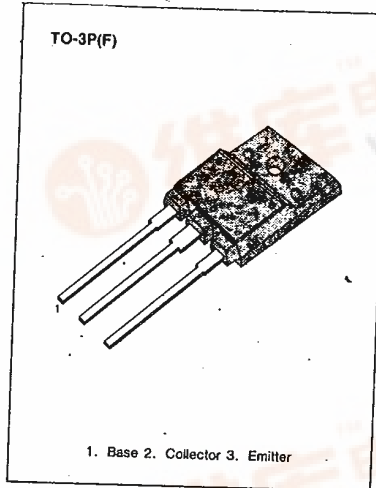
**COLOR TV HORIZONTAL OUTPUT  
APPLICATIONS**

High Collector-Base Voltage  $V_{CB0} = 1500V$

( T-33-11

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	1500	V
Collector-Emitter Voltage	$V_{CE0}$	800	V
Emitter-Base Voltage	$V_{EB0}$	6	V
Collector Current	$I_C$	3.5	A
Collector Current (Peak)	$I_C$	10	A
Collector Dissipation ( $T_c = 25^\circ C$ )	$P_C$	50	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55~150	$^\circ C$



3

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CB0}$	$V_{CB} = 800V, I_E = 0$			10	$\mu A$
Emitter Cutoff Current	$I_{EB0}$	$V_{EB} = 5V, I_C = 0$			1	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 0.5A$	8			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2.5A, I_B = 0.8A$			8	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 2.5A, I_B = 0.8A$			1.5	V
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 0.5A$		3		MHz
Fall Time	$t_f$	$I_C = 3A, I_{B1} = 0.8A, I_{B2} = -1.6A, R_L = 66.7\Omega$			0.4	$\mu S$



14E D 796442 0007675 2

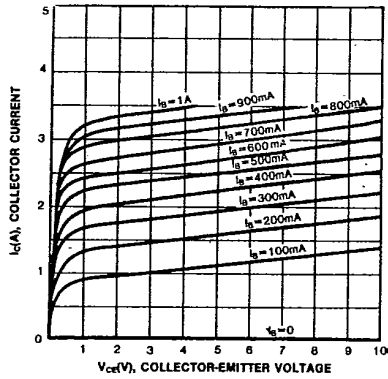
# NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

KSD5015

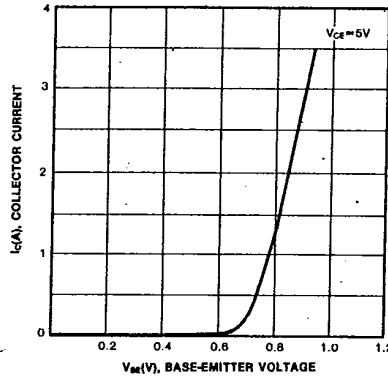
SAMSUNG SEMICONDUCTOR INC

T-33-11

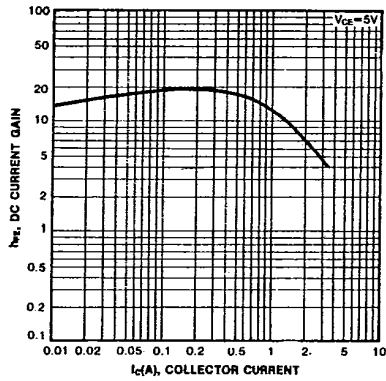
STATIC CHARACTERISTIC



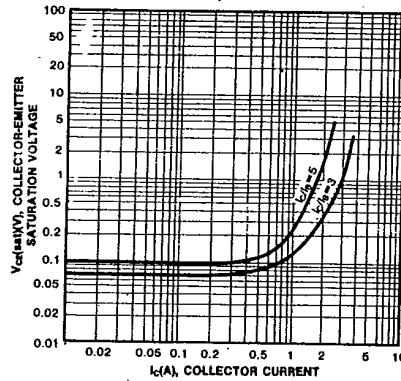
BASE-EMITTER ON VOLTAGE



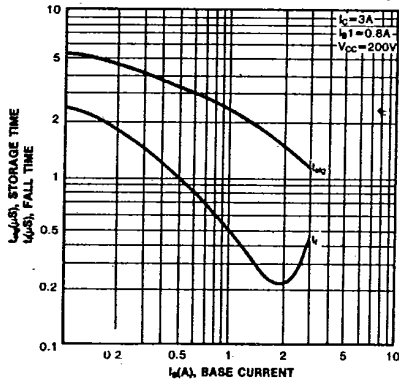
DC CURRENT GAIN



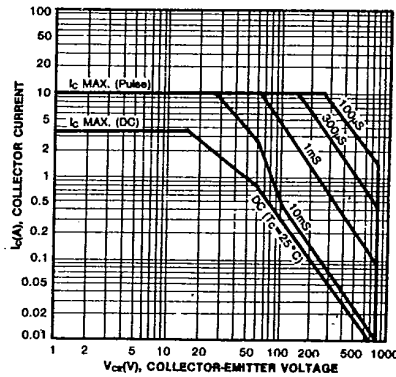
COLLECTOR-EMITTER SATURATION VOLTAGE



TURN ON TIME



SAFE OPERATING AREA

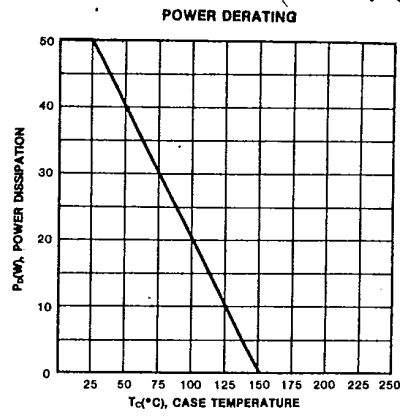
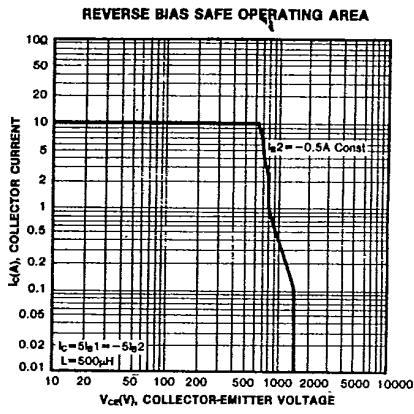


14E D 7964142 0007676 4  
KSD5015

# NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

SAMSUNG SEMICONDUCTOR INC

T-33-11



3

**KSD5016**

SAMSUNG SEMICONDUCTOR INC

**NPN TRIPLE DIFFUSED  
PLANAR SILICON TRANSISTOR**

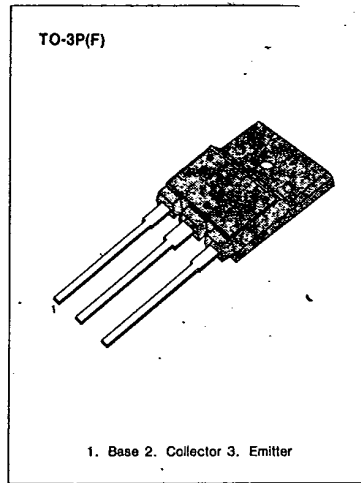
T-33-11

**COLOR TV HORIZONTAL OUTPUT  
APPLICATIONS**

High Collector-Base Voltage  $V_{CB0} = 1500V$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	1500	V
Collector-Emitter Voltage	$V_{CE0}$	800	V
Emitter-Base Voltage	$V_{EB0}$	6	V
Collector Current	$I_C$	5	A
Collector Current (Peak)	$I_C$	16	A
Collector Dissipation ( $T_C = 25^\circ C$ )	$P_C$	60	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55~150	$^\circ C$



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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CB0}$	$V_{CB} = 800V, I_E = 0$			10	$\mu A$
Emitter Cutoff Current	$I_{EB0}$	$V_{EB} = 5V, I_C = 0$			1	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 1A$	8			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4A, I_B = 0.8A$			5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4A, I_B = 0.8A$			1.5	V
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 1A$		3		MHz
Fall Time	$t_f$	$I_C = 4A, I_B1 = 0.8A$ $I_B2 = -1.6A, R_L = 50\Omega$			0.4	$\mu S$

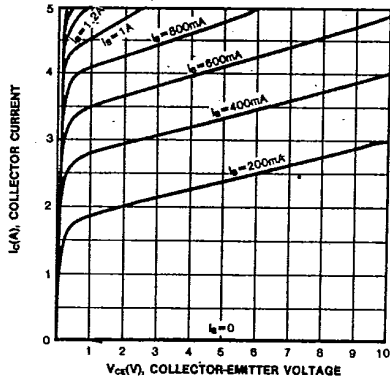


KSD5016

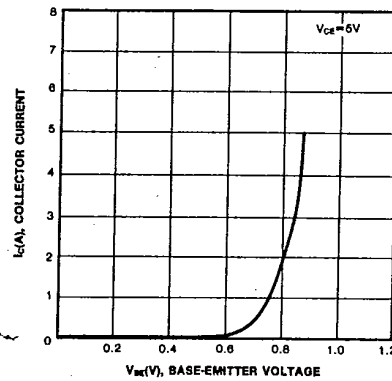
NPN TRIPLE DIFFUSED  
PLANAR SILICON TRANSISTOR

T-33-11

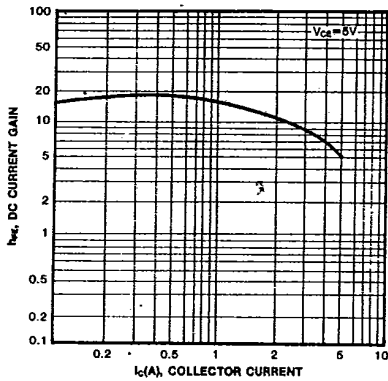
STATIC CHARACTERISTIC



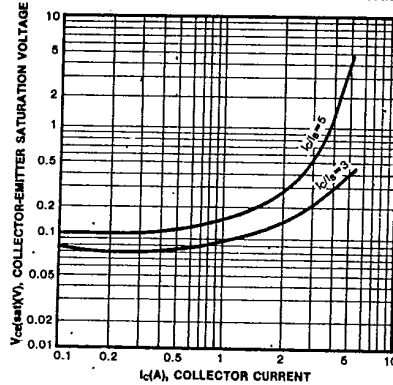
BASE-EMITTER ON VOLTAGE



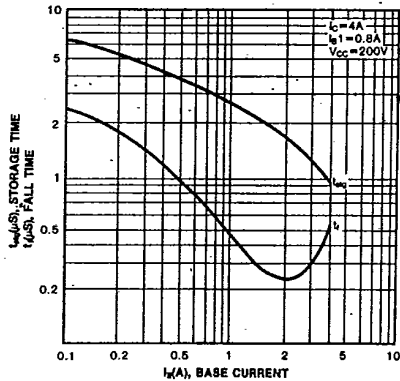
DC CURRENT GAIN



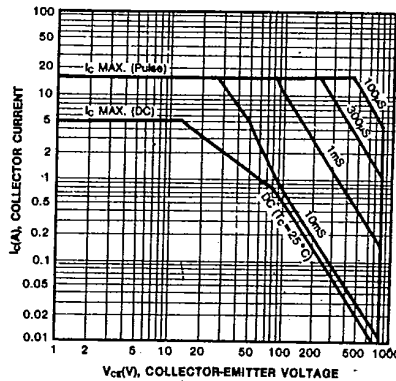
COLLECTOR-EMITTER SATURATION VOLTAGE



TURN ON TIME



SAFE OPERATING AREA



3

**KSD5016**

**NPN TRIPLE DIFFUSED  
PLANAR SILICON TRANSISTOR**

T-33-11

