

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **ASI BLV33** is a Common Emitter Device Designed for Class A Television Applications.

**FEATURES INCLUDE:**

- Gold Metalization
- Emitter Ballasting

**MAXIMUM RATINGS**

<b>I<sub>C</sub></b>	12.5 A
<b>V<sub>CESM</sub></b>	65 V
<b>V<sub>CEO</sub></b>	33 V
<b>P<sub>DISS</sub></b>	132 W @ T <sub>C</sub> = 25 °C
<b>T<sub>J</sub></b>	-65 °C to +200 °C
<b>T<sub>STG</sub></b>	-65 °C to +150 °C
<b>θ<sub>JC</sub></b>	1.5 °C/W

PACKAGE STYLE .500 4L STUD		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	1.010/25,65	1.050/26,67
B	.220/5,59	.230/5,84
C	.495/12,57	.505/12,83
D	.003/0,08	.007/0,18
E	.160/4,06	.180/4,57
F	.622/15,80	
G	.100/2,54	.130/3,31
H	.415/10,54	.425/10,80
I	.720/18,29	
J	.250/6,35	.290/7,37
<b>ORDER CODE: ASI10498</b>		

**CHARACTERISTICS** T<sub>C</sub> = 25°C

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
<b>BV<sub>CEO</sub></b>	I <sub>C</sub> = 100 mA			33			<b>V</b>
<b>BV<sub>CES</sub></b>	I <sub>C</sub> = 25 mA			65			<b>V</b>
<b>BV<sub>EBO</sub></b>	I <sub>E</sub> = 10 mA			4.0			<b>V</b>
<b>I<sub>CES</sub></b>	V <sub>CE</sub> = 30 V					10	<b>mA</b>
<b>h<sub>FE</sub></b>	V <sub>CE</sub> = 25 V	I <sub>C</sub> = 3.0 A		15		100	<b>---</b>
<b>C<sub>c</sub></b>	V <sub>CB</sub> = 25 V	f = 1.0 MHz			155		<b>pF</b>
<b>C<sub>re</sub></b>	V <sub>CE</sub> = 25 V	I <sub>C</sub> = 100 mA	f = 1.0 MHz		88		
<b>C<sub>cs</sub></b>	V <sub>CE</sub> = 25 V	I <sub>C</sub> = 100 mA	f = 1.0 MHz		3.0		
<b>f<sub>T</sub></b>	V <sub>CB</sub> = 25 V	I <sub>E</sub> = 3.0 A			680		<b>MHz</b>
	V <sub>CB</sub> = 25 V	I <sub>E</sub> = 6.0 A			750		
<b>G<sub>P</sub></b>	V <sub>CE</sub> = 25 V	I <sub>C</sub> = 3.2 A	P <sub>out</sub> = 19 W	9.0	9.7		<b>---</b>
	f = 224.25 MHz						

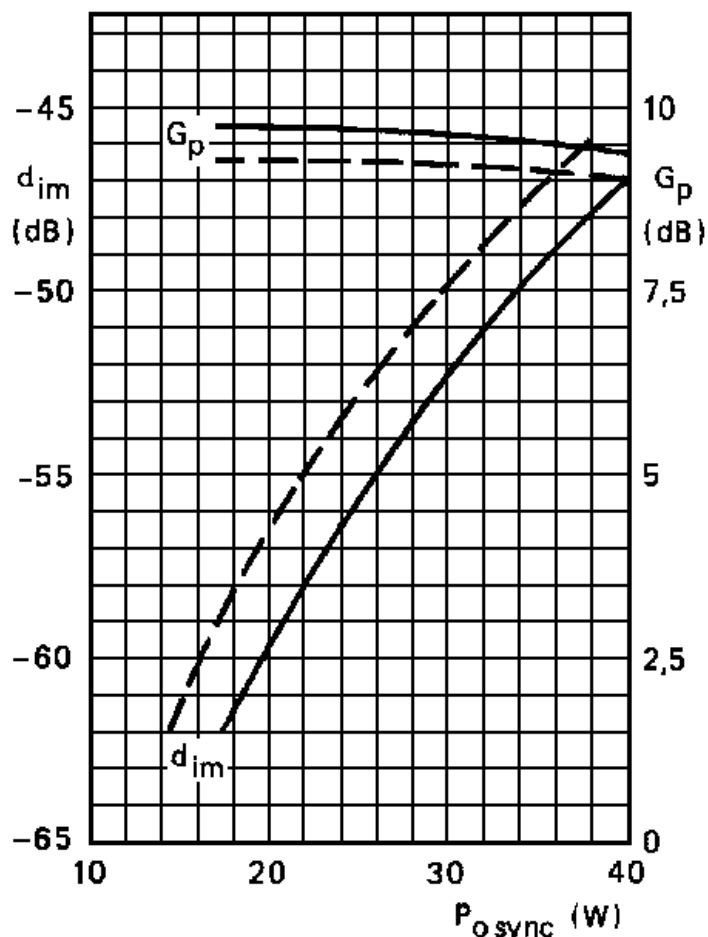


Fig. 1 Intermodulation distortion ( $d_{im}$ ) and power gain as a function of output power.

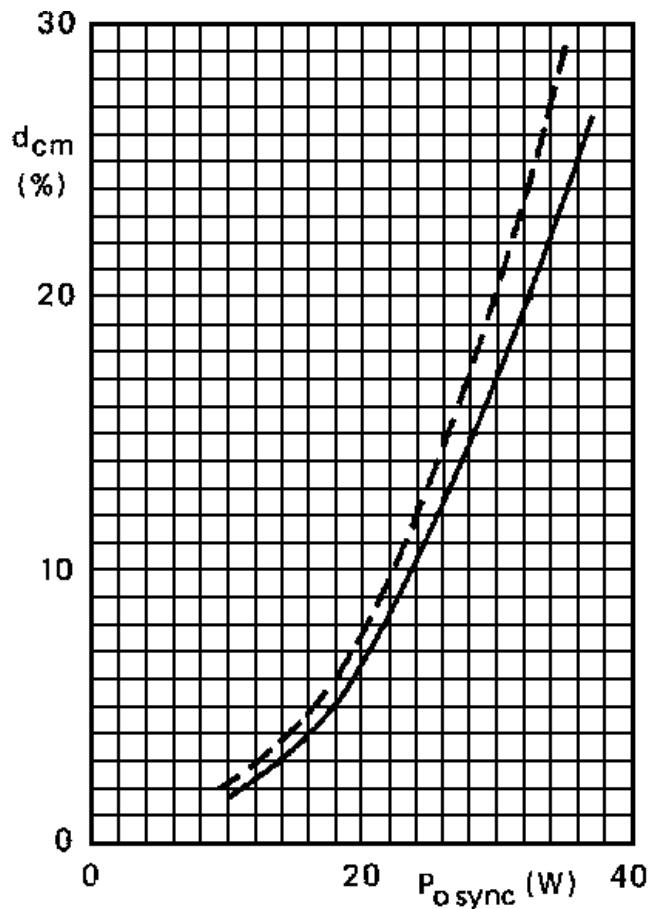


Fig. 2 Cross-modulation distortion ( $d_{cm}$ ) as a function of output power.

Conditions for fig. 1 and 2:

Typical values;  $V_{CE} = 25$  V;  $I_C = 3.2$  A;  $T_h = 25^\circ\text{C} - T_h = 70^\circ\text{C}$ ;  $f_{vision} = 224.25$  MHz.

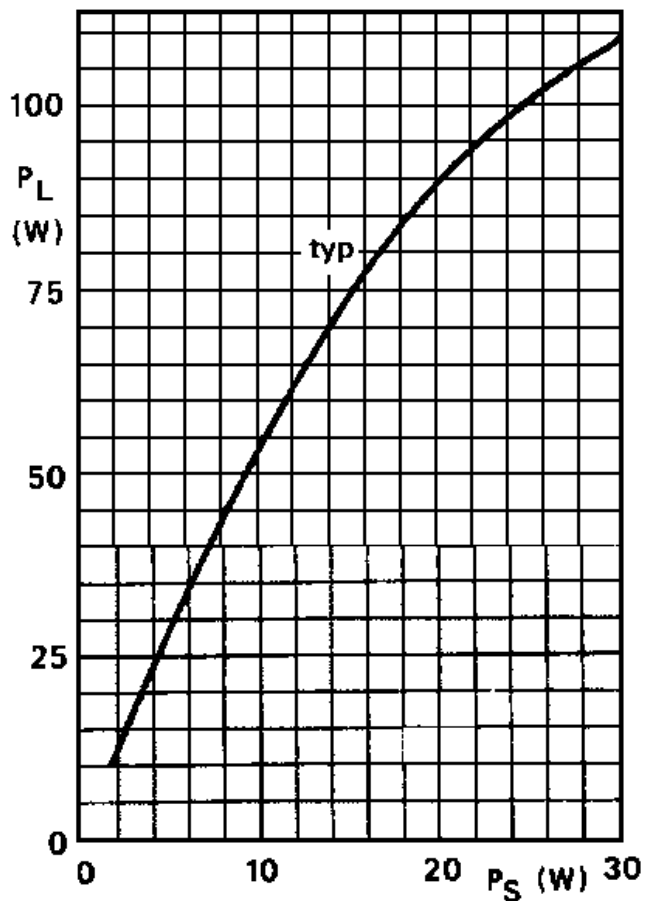


Fig. 3  $V_{CE} = 28$  V;  $I_{C(ZS)} = 100$  mA;  $T_h = 70$  °C;  
 $f_{\text{vision}} = 224.25$  MHz.

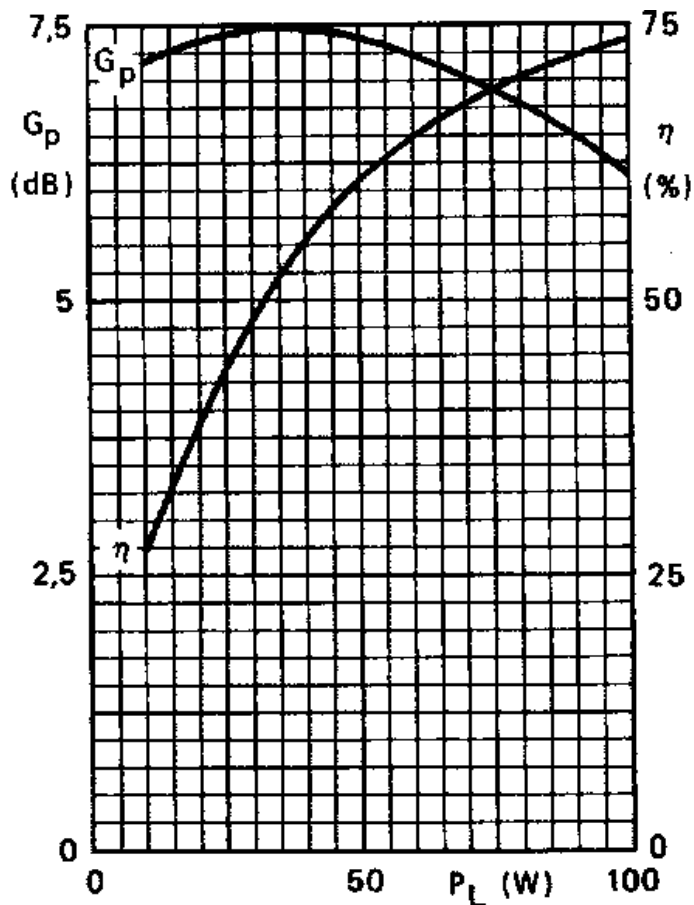


Fig. 4  $V_{CE} = 28$  V;  $I_{C(ZS)} = 100$  mA;  $T_h = 70$  °C;  
 $f_{\text{vision}} = 224.25$  MHz; typical values.