

SANYO

No.1005B

2SK315

N-Channel Junction Silicon Field-Effect Transistor

FM TUNER APPLICATIONS

Features

- Ideal for FM tuners in radios, stereos, etc.
- Because it is compactly packaged, sets can be made compact.
- Small c_{rss} ($c_{rss}=0.08\text{pF typ}$).
- High y_{fs} ($y_{fs}=12.0\text{ms typ}$).

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

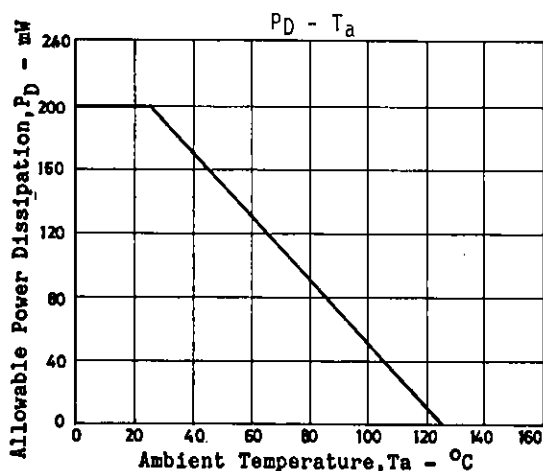
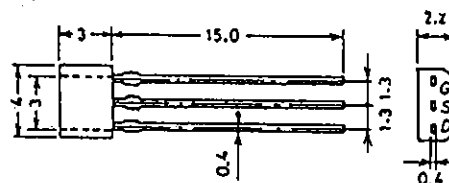
			unit
Gate to drain voltage	V_{GDO}	-20	V
Gate current	I_G	10	mA
Drain current	I_D	20	mA
Allowable power dissipation	P_D	200	mW
Junction temperature	T_J	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Gate to drain breakdown voltage	$V_{(BR)GDO}$	$I_G=-10\mu\text{A}$	-20			V
Gate cutoff current	I_{GSS}	$V_{GS}=-0.5\text{V}, V_{DS}=0\text{V}$			-10	nA
Drain current	I_{DSS}	$V_{DS}=5\text{V}, V_{GS}=0\text{V}$	2.5*		24.0*	mA
Cutoff voltage	$V_{GS(off)}$	$V_{DS}=5\text{V}, I_D=10\mu\text{A}$			-3.5	V
Forward transfer admittance	$ y_{fs} (1)$	$V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=1\text{kHz}$	6.0	12.0		ms
Forward transfer admittance	$ y_{fs} (2)$	$V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=100\text{MHz}$	6.0	12.0		ms
Input capacitance	c_{iss}	$V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		8.0		pF
Reverse transfer capacitance	c_{rss}	$V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		0.08	0.3	pF
Output capacitance	c_{oss}	$V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		6.5		pF
Power gain	PG	$V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=100\text{MHz}$		23		dB
Noise figure	NF	$V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=100\text{MHz}$		2.2	4.0	dB

Refer to specified test circuit.
See specified Test Circuit.* The 2SK315 is graded as follows by I_{DSS} (unit: mA):

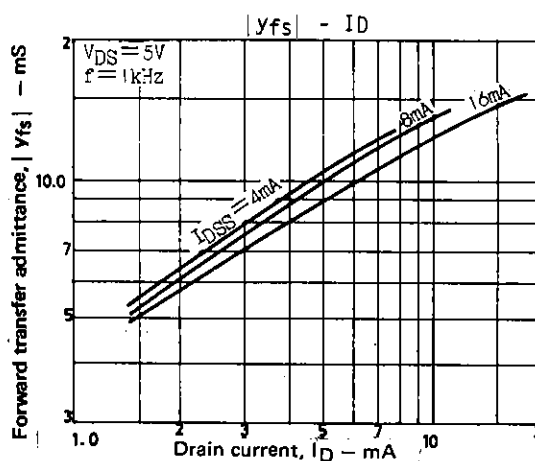
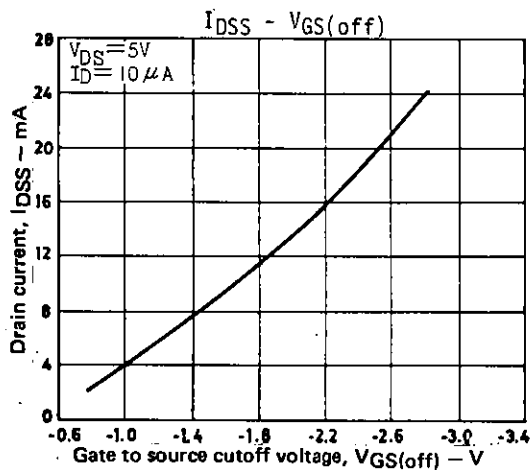
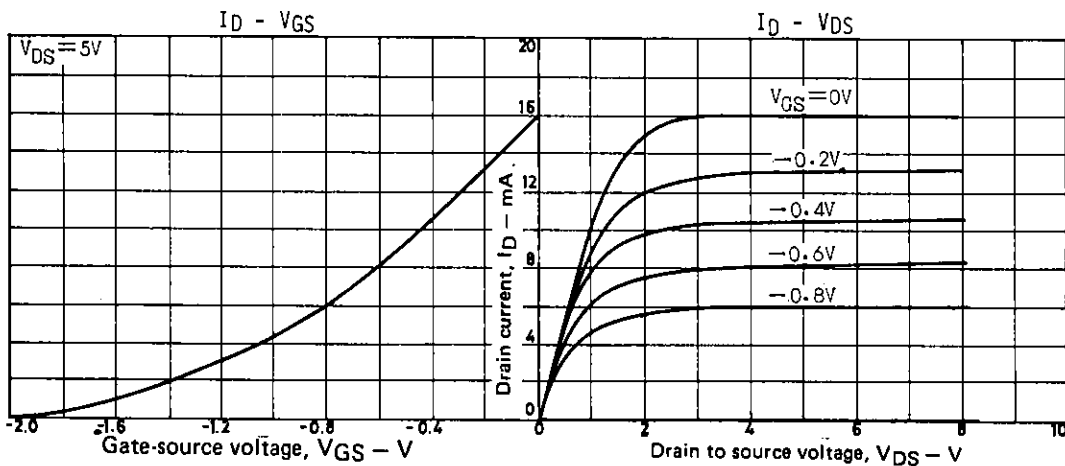
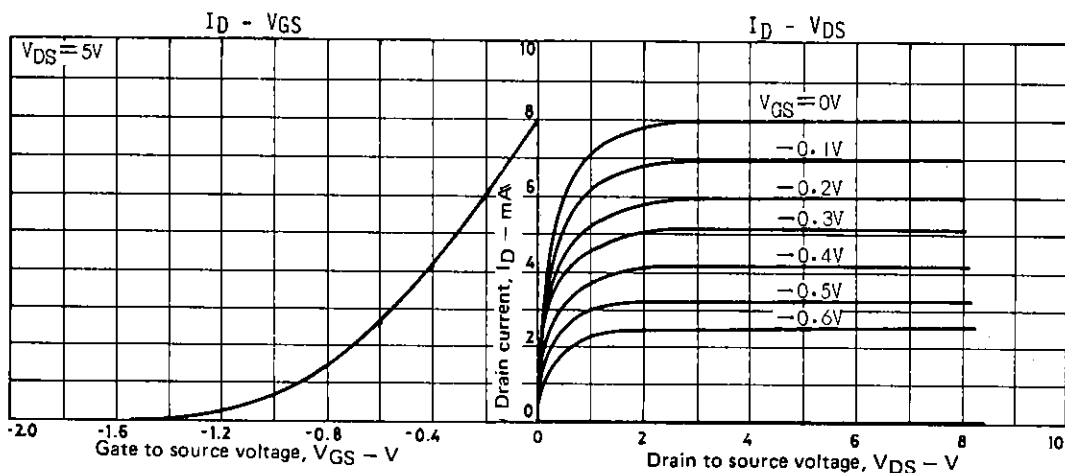
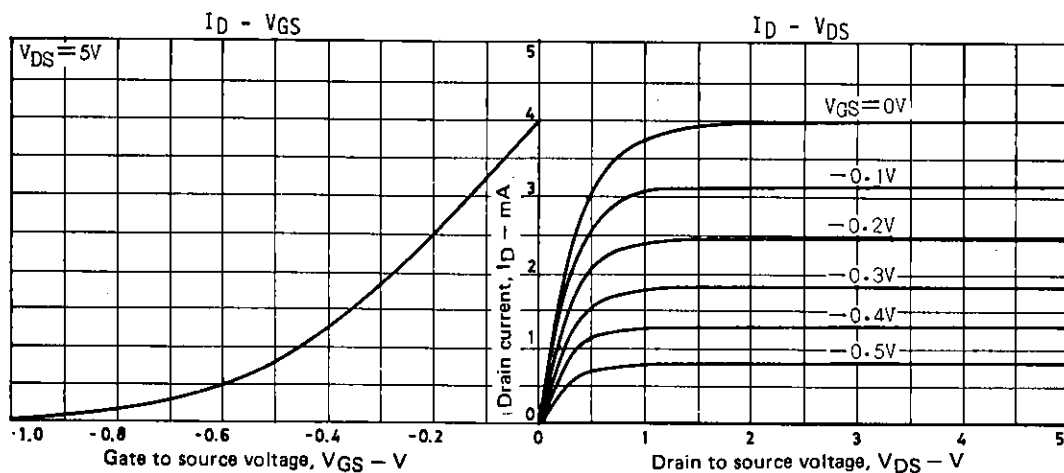
2.5	E	6.0	5.0	F	12.0	10.0	G	24.0
-----	---	-----	-----	---	------	------	---	------

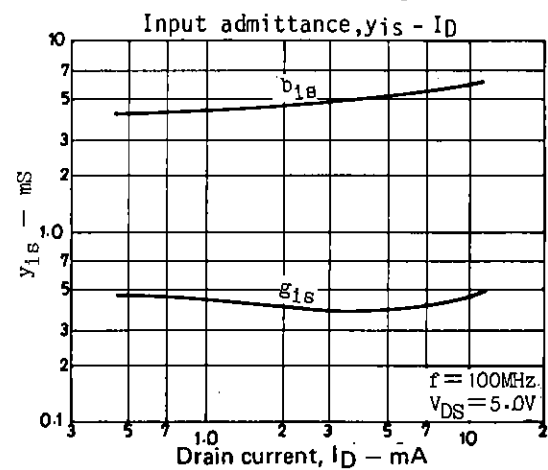
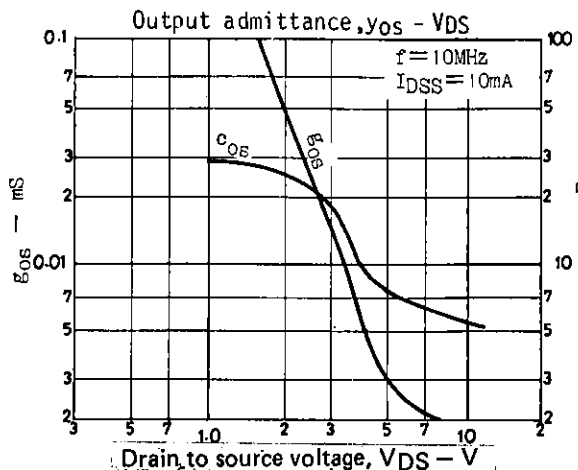
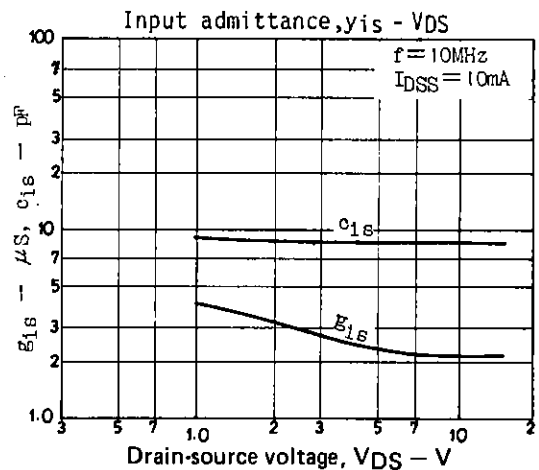
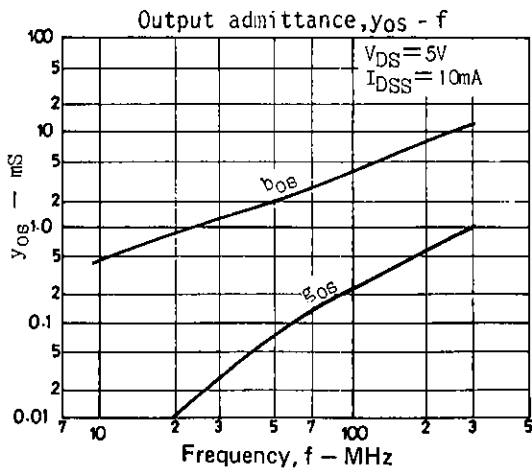
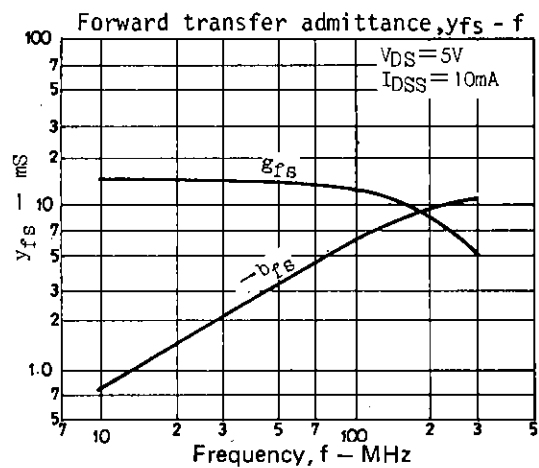
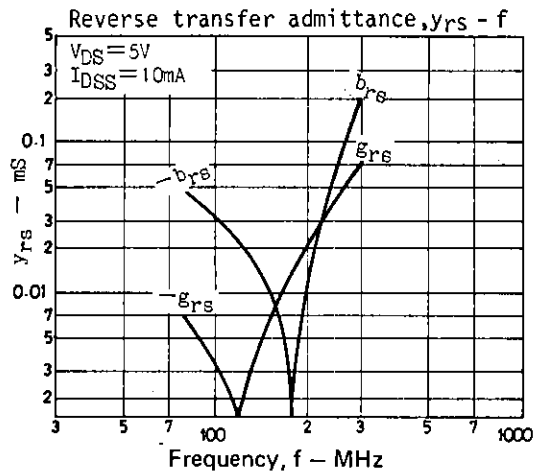
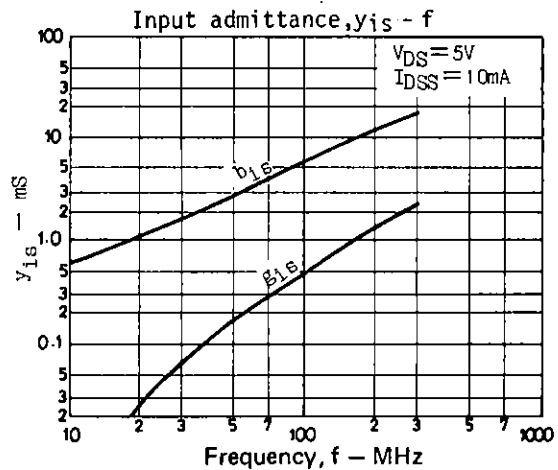
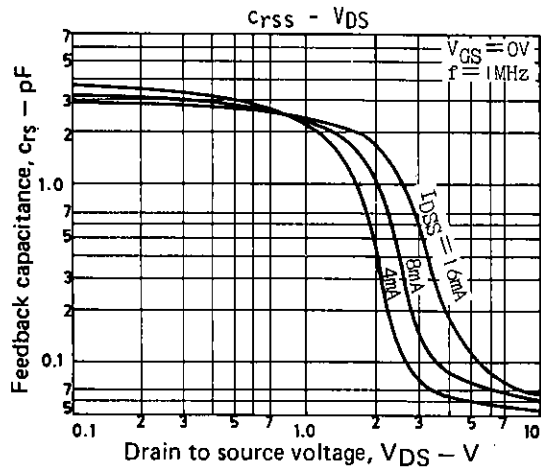
**Package Dimensions 2040**
(unit: mm)G: Gate
S: Source
D: Drain

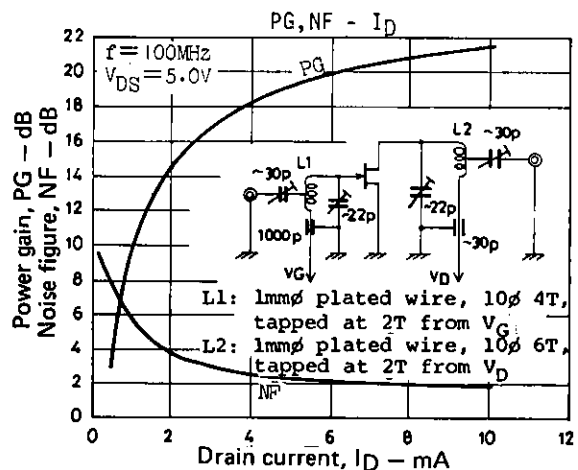
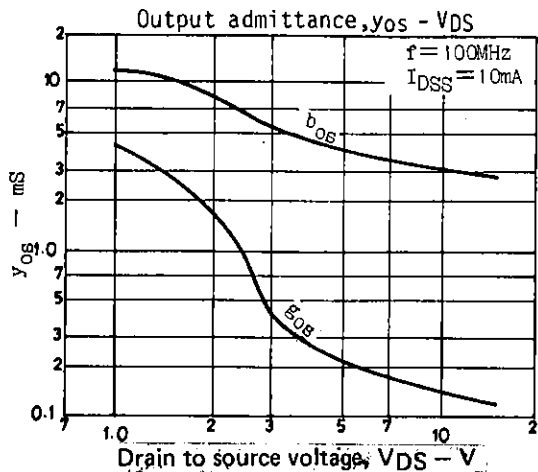
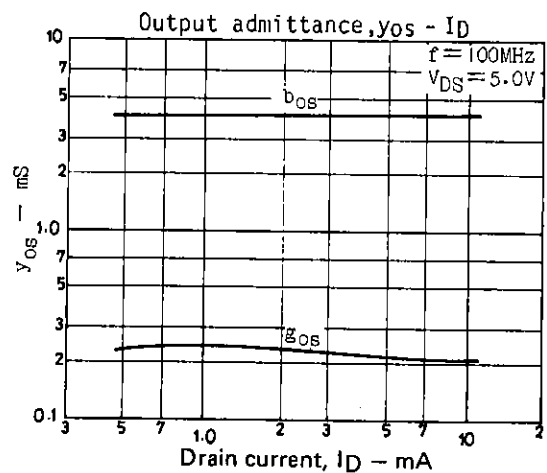
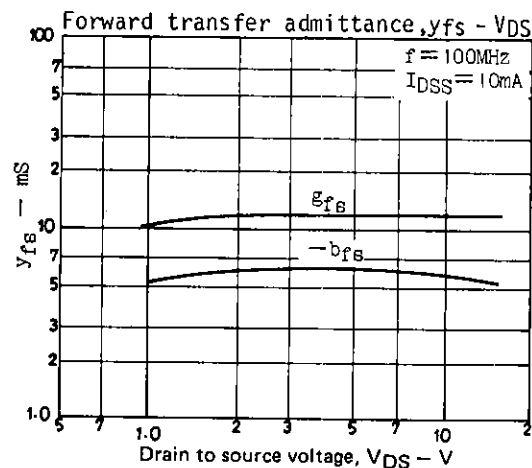
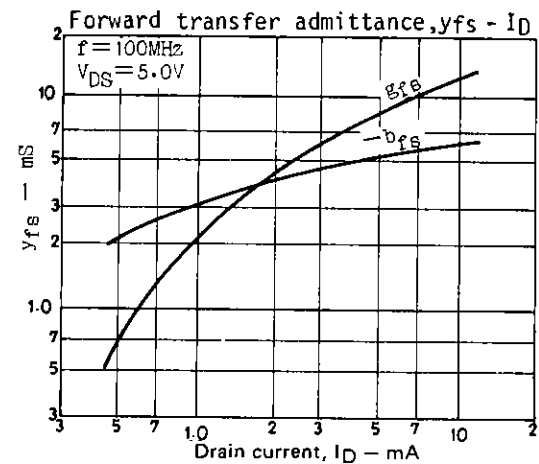
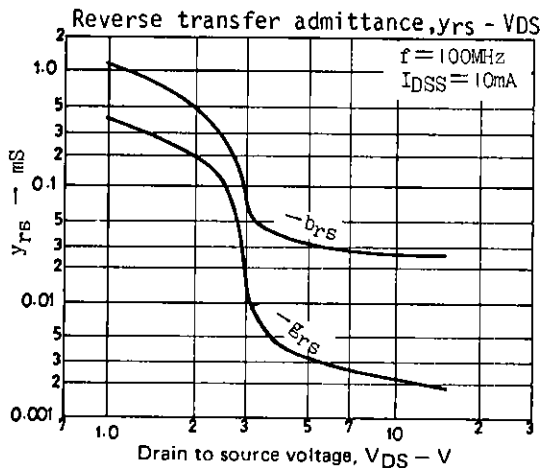
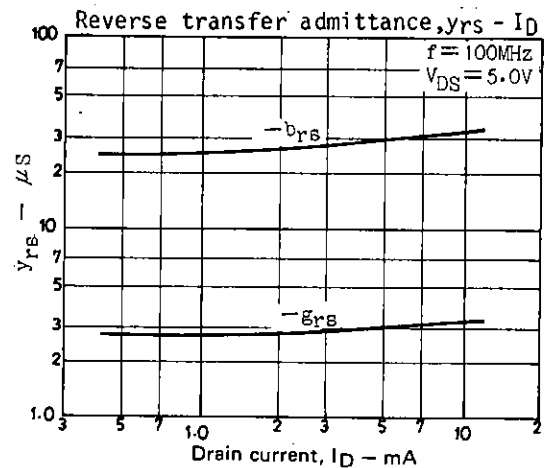
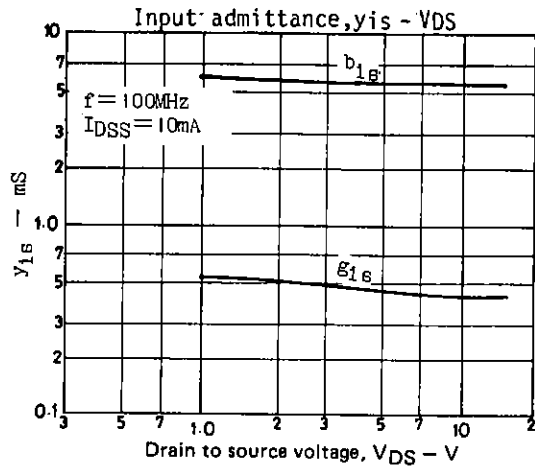
SANYO: SPA

SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

6017KI/3145KI No1005-1/5







- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.