

Protection of RS-485 Transceivers.

### FEATURES

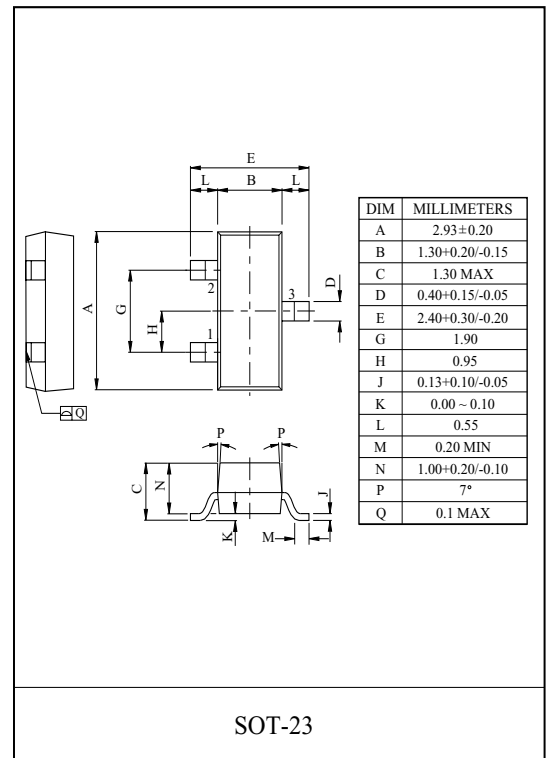
- 400 Watts peak pulse power ( $t_p=8/20\mu s$ )
- Transient protection for data lines to  
IEC 61000-4-2(ESD) 15kV(Air), 8kV(Contact).  
IEC 61000-4-4(EFT) 40A ( $t_p=5/50ns$ )  
IEC 61000-4-5(Lightning) 12A ( $t_p=8/20\mu s$ )
- Standard SOT-23 Package.
- Protects two +12V to -7V lines.
- Low Capacitance.
- Low Clamping Voltage.

### APPLICATIONS

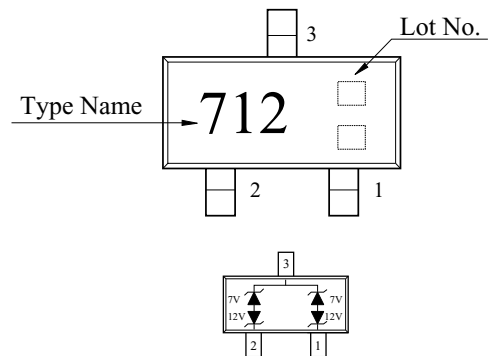
- Protection of RS-485 transceivers with extended common-mode range.
- Security Systems.
- Automatic Teller Machines.
- HFC Systems.
- Networks.

### MAXIMUM RATING ( $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PK}$	400	W
Peak Pulse Current ( $t_p=8/20\mu s$ )	$I_{PP}$	17	A
Operating Temperature	$T_j$	-55 ~ 125	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ C$



### Marking



# PG712FBS23

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Pin 3 to 1 & Pin 3 to 2 (7V TVS)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	7	V
Reverse Breakdown Voltage	$V_{BR}$	$I_r=1mA$	7.5	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM}=7V$	-	-	20	$\mu A$
Clamping Voltage	$V_C$	$I_{pp}=5A, t_p=8/20\mu s$	-	-	10	V
		$I_{pp}=17A, t_p=8/20\mu s$	-	-	12	
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$	-	-	75	pF

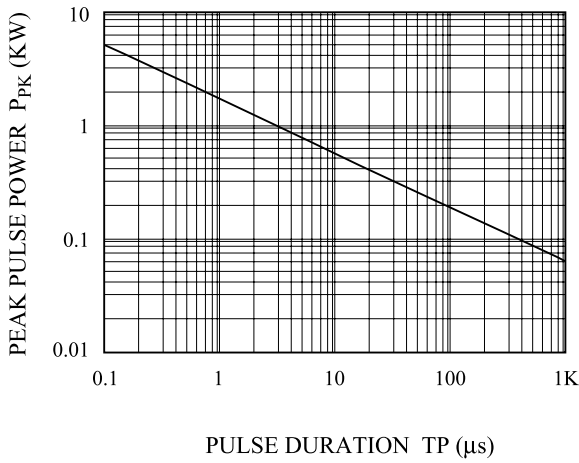
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Pin 1 to 3 & Pin 2 to 3 (12V TVS)

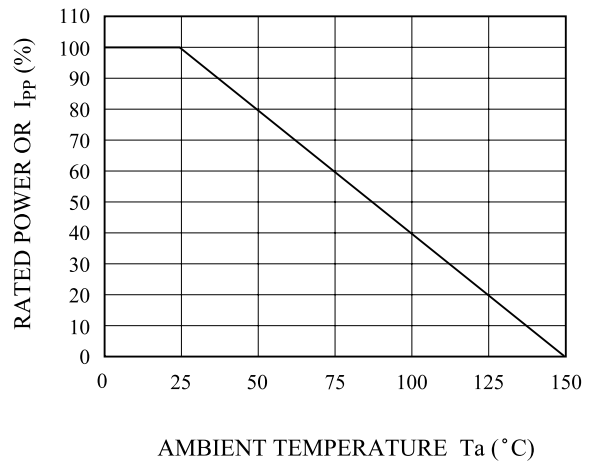
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_r=1mA$	13.3	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM}=12V$	-	-	1	$\mu A$
Clamping Voltage	$V_C$	$I_{pp}=5A, t_p=8/20\mu s$	-	-	20	V
		$I_{pp}=17A, t_p=8/20\mu s$	-	-	26	
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$	-	-	75	pF

# PG712FBS23

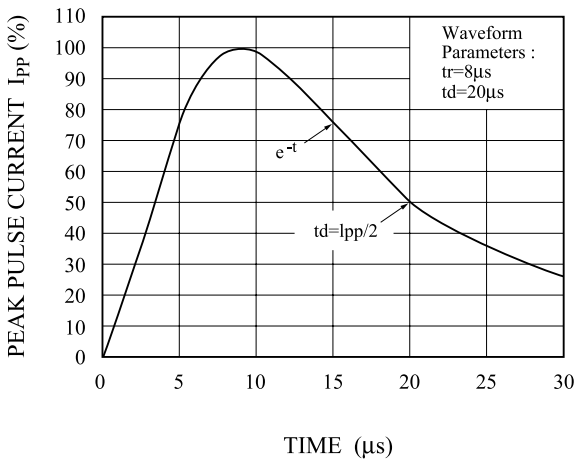
NON-REPETITIVE PEAK PULSE  
POWER VS. PULSE TIME



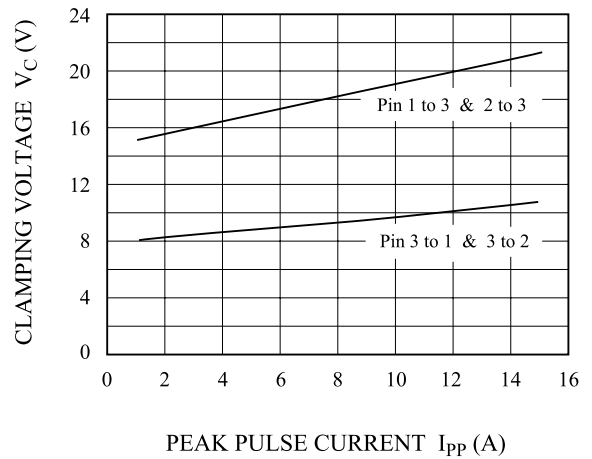
POWER DERATION CURVE



PULSE WAVEFORM



CLAMPING VOLTAGE VS.  
PEAK PULSE CURRENT



CAPACITANCE VS.  
REVERSE VOLTAGE

