

Symbols and Abbreviations

A	limiting availability
$A(t)$	pointwise availability
CAS	current adjustment subsystem
CCF	common mode (cause) failure
Δt_w	repair time window
δ_{jk}	Kronecker's delta function
$D(t)$	down time
DCL	dormant closed line
DCT	dual - coupled triode subsystem
DIV	divider
DOL	dormant opened line
$E[X]$	mathematical expectation of the random variable X
FSP	fast scram pentode subsystem
FSS	fast scram subsystem
FST	fast scram triode subsystem
$F(t)$	cumulative failure probability
$f(t)$	cumulative failure probability density (or distribution)
$\phi(\mathbf{X}(t))$	structure function of the random vector $\mathbf{X}(t)$
$I_{\phi(j)}$	structural importance of component j
$IMP_S(j)$	reliability importance of component j
IMP_{FV}	Fussell - Vesely importance
IMP_{BB}	Birnbaum importance
IMP_{BP}	Balrow - Proschan importance
κ	coefficient of variation
$\lambda(t)$	failure (or hazard) rate
$\lambda^*(t)$	common - failure rate
$\lambda(j \rightarrow k)$	transition rate, usually failure transition rate
$L_{(\mu, \sigma)}(x)$	Log - normal distribution
$\mu(t)$	repair rate
$\mu(j \rightarrow k)$	repair transition rate

M	transition matrix
<i>MRY</i>	master relay subsystem
<i>MTTF</i>	mean time to failure
<i>MTBF</i>	mean time between failures
<i>MTTR</i>	mean time to repair
<i>MTBR</i>	mean time between repairs
<i>MTTFF</i>	mean time to first failure
<i>MTTFR</i>	mean time to first repair
$N_{(\mu, \sigma)}(x)$	Gaussian (normal) distribution
$\pi(S), \wp(S)$	partition of the event S
$P(A), \Pr(A)$	probability of the event A
$\Pr(A B)$	probability of A given B
Q	limiting unavailability
$Q(t)$	pointwise unavailability
$R(t)$	reliability
<i>RY</i> [14]	relay unit
<i>SDA</i>	scram level definition and activation subsystem
<i>SRY</i>	slave relay subsystem
<i>SSS</i>	slow scram subsystem
<i>SST</i>	slow scram triode subsystem
τ	inspection time, or time parameter
$U(t)$	pointwise unreliability, up time
<i>UIC</i>	uncompensated ionizing chamber unit
V [3]	pentode unit
$\varpi(t_1, t_2)$	interval failure frequency
ϖ	failure frequency